B&B ELECTRONICS

Make The Right Connections

IMC Networks

FLEXIBILITY & MANAGEMENT IN A FOUR PORT GIGABIT DEVICE

IE-Multiway

see page 4

2012 Product Catalog

Summer

Company Overview

B&B Electronics is proud to present the IMC Networks family of specialized industrial-grade fiber media conversion and fiber optic access solutions for Enterprise, Government and Service Providers' LANs, First-Mile FTTx networks and Metropolitan Area Networks.

With over 1.5 millions products shipped, B&B Electronics products are deployed wherever data moves. The IMC family of products are deployed where copper to fiber, dual to single-fiber or Multi-mode to Single-mode fiber conversions are required, carrying both managed and unmanaged media converter modules that support 10, 100, 10/100, 10/100/1000 and Gigabit Ethernet, VDSL, T1/E1 and DS3/E3 technologies. B&B Electronics' products are sold through a worldwide network of authorized distributors, resellers and OEM partners in more than 50 countries. B&B Electronics is ISO 9001:2008 registered; all products are RoHS compliant, Made in the USA, and carry a 6 year comprehensive warranty (SFP products offer a 1 year warranty).

Product Overview

B&B Electronics IMC Networks media conversion solutions are available in a variety of form factors and configurations that allow networks to perform better, faster and more reliably; from low-cost standalone units to rack-mountable modules designed for high-density applications. The products in this catalog are organized by the following sections:

- Optical Access/FTTx products allow fiber network operators to deliver next-generation Managed Ethernet, high-speed Internet, Private line and Transparent LAN services
- Unmanaged Converters allow customers to convert multiple protocols and interfaces, such as 10/100Base-T copper to 100Base-Fx fiber
- Managed Converters come in a wide range of SNMP-managable devices and a variety of protocols including 10/100/1000 Ethernet and T1/E1/J1 range extenders
- Power over Ethernet (PoE) technology allows flexibility in Wireless Access Point and IP camera applications
- Fiber-to-Fiber Mode Converters connect fiber network segments with dissimilar fiber types
- SFPs allow network operators to upgrade fiber types and speeds, extending the life-span of legacy hardware
- Chassis options support various FTTx and media conversion modules, ranging from single-slot, standalone unmanaged devices to 20-slot, fully-managed rack-mounted chassis
- SNMP iView^2 Element Management System (EMS) software is available Free of charge

Why B&B Electronics

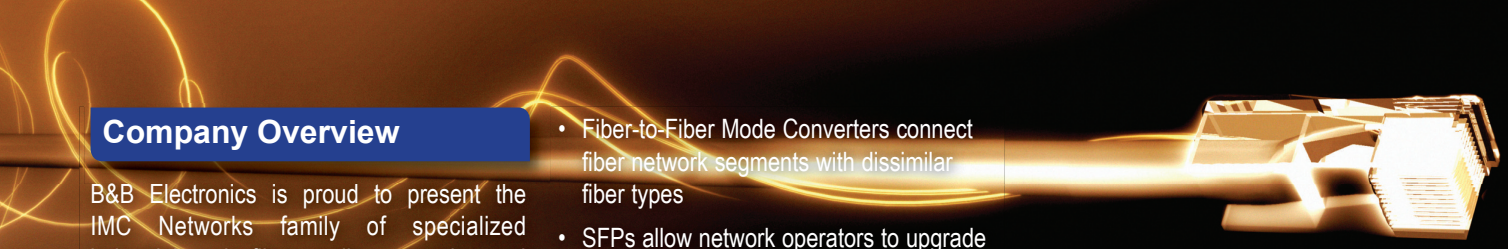
Any supplier can sell you a product, but B&B Electronics backs up its business with an unusual level of performance, urgency and accountability.

We are passionate about delivering quality connectivity solutions that are known for reliability, ease of use and ease of implementation. We are responsible for providing solutions and advice you can depend on. Every process, every product, every call, and every day presents endless opportunities to improve your business and to become your most preferred supplier.

Worldwide sales distribution with offices in:

- Ottawa, IL
- Foothill Ranch, CA
- Clearwater, FL
- Ireland

- Free worldwide technical support
- FCS Complimentary Fiber Consulting Services
- ISO 9001:2008 product quality management
- RoHS environmental compliance
- MEF certification
- EU Reach certification
- 6-year comprehensive warranty (SFP products are 1-year)
- Made in the USA (except SFP products)



Industry First Innovations

- 16-bit Ethernet LAN card (05/88)
- Ethernet over non-Ethernet cable (07/88)
- Modular repeaters (10/89)
- Media conversion products (09/91)
- Modular hubs (04/95)
- Manageable media converters (09/96)
- Gigabit Ethernet copper-to-fiber converters (04/00)
- Multi-media, multi-protocol chassis platform w/ SNMP (11/00)
- USB-powered miniature media converters (12/02)
- Compact Industrial Ethernet optical demarcation device (08/06)

B&B Electronics Free Software

iView^2 / iView^2 v 3.0

IMC's free all-in-one network management application is offered in both a web and PC-based version. iView^2 gives users the ability to remotely view and manage all supported B&B Electronics SNMP manageable and "iMcV" modules via an intuitive GUI.

UMA

The Unified Management Agent allows users to manage up to 41 devices installed in an iMediaChassis with a single IP address from a central location. Additionally, UMA allows users to administer firmware upgrades over multiple devices.

SNMP Management Module

The SNMP Management Module allows users to utilize the full SNMP functionality of all manageable "iMcV" modules when installed concurrently in an iMediaChassis. Employing managed media converters in your network allows for troubleshooting at remote sites without the initial need for a costly truck roll.

See page 45 for ordering information

B&B ELECTRONICS

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Converting the Metric System

Equation to calculate meters and kilometers to miles.

1 m = 0.000621 Miles
(m x 0.000621 = Miles)

1 km = 0.621 Miles
(km x 0.621 = Miles)

Metric Conversion Table	
100 m =	0.0621Miles
550 m =	0.341 Miles
2 km =	1.242 Miles
15 km =	9.315 Miles
20 km =	12.42 Miles
40 km =	24.84 Miles
60 km =	37.26 Miles
70 km =	43.47 Miles
80 km =	49.68 Miles
120 km =	74.52 Miles

FREE
iVIEW2
DEVICE MANAGEMENT APPLICATION
SNMP Management Software

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Product Overview

About Media Converters

Media converters connect different types of cabling media, extending transmission distances well beyond the capabilities of twisted pair wiring, and allowing for integration of new fiber-based equipment into non-fiber legacy networks. Conversely, media converters also allow operators to preserve their investment in legacy copper-port hardware as more and more legacy copper networks are updated with fiber.

B&B Electronics' media conversion solutions are available in a variety of form factors and configurations, from low-cost standalone units to rack-mountable modules designed for high-density applications.

About FTTx & Optical Access

Optical Access and FTTx solutions from B&B Electronics integrate traditional media converters with advanced remote management and configuration capabilities, allowing service providers to deliver next-generation, managed, high-speed Internet, Ethernet Private Line and Transparent LAN services to businesses, multi-dwelling units (MDUs) and residential customers. FTTx solutions are also used by Enterprise customers when managed media converters are needed on campus networks.

B&B Electronics' solutions are available in a wide variety of form factors and configurations, ranging from standalone units (CPE), to rack-mountable modules designed for high-density applications.

Solutions Overview

Service Providers

B&B Electronics' fiber optic media conversion and optical access solutions can make provisioning of fiber-based services less complex and more affordable.

Modular, chassis-based Central Office (CO) solutions accommodate a variety of managed Ethernet, VDSL, T1/E1/J1, DS3/E3 fiber extension and FTTx applications from the same platform. Intelligent Customer Premises Equipment (CPE) solutions allow service providers to control, manage and monitor the entire access network and end points without a visit to the customer's location, reducing operational costs while providing capabilities not commonly found on other Ethernet media converters.

Whether providing Fiber-to-the-Home, Business or Premises, B&B Electronics' solutions support distances up to 100 km, and offer single-strand and CWDM optical interfaces. The products work seamlessly with other manufacturers' products to maximize service providers' investment in the existing equipment and fiber network infrastructure.

Enterprise LAN/WAN

Fiber optic media converters make a crucial connection between different cabling types and speeds. Media converters are the most flexible, cost-effective solution for extending network distances and integrating fiber optic cabling into twisted pair structured cabling systems. They increase performance of active equipment and also accelerate legacy network segments to Gigabit speeds.

With solutions ranging from simple, standalone converters to intelligent, SNMP managed systems, B&B Electronics provides the industry's widest variety of media and mode converters. These solutions support most Ethernet speeds, cabling types and distances, fitting a wide range of enterprise networking applications including:

- Bringing Fiber-to-the-Desk
- Bridging LAN segments with dissimilar fiber types
- Using PoE (Power over Ethernet) to bring power to network devices such as Wireless Access Points and IP Cameras

Government

The U.S. Government has historically been a pioneer in networking research, development and Internet technology. B&B Electronics proudly supports federal, state and local governments with fiber solutions that combine high security with greater bandwidth.

B&B Electronics is a preferred vendor to government organizations worldwide. In addition to standalone and PC card media converters, B&B Electronics also has an extensive line of SNMP-managed media converters that offer increased security. IMC Networks' fiber mode converters allow network managers to connect multi and single-mode network segments together, simplifying network planning.

B&B Electronics proudly provides special pricing and free ground shipping under GSA contract #GS-35F-0491J. Visit http www.imcnetworks.com/Government/ for more information.

GSA Contract Holder
FSS Contract GS-35F-0491J

FCS
FREE Fiber Consulting Services

TAA COMPLIANT

Why Fiber Optics?

Fiber is most commonly associated with long distance connections. Today, however, it is rapidly gaining market share in LAN topologies, once considered the domain of copper cabling. Fiber offers many advantages:

- It has exceptional bandwidth, and can carry multiple signals concurrently
- It is immune to electromagnetic interference
- It has no electromagnetic emissions, making it resistant to eavesdropping
- It is lightweight
- It is virtually "future proof"

Quick Product Search Matrix

Products Featured in This Catalog

		IE	Protocol								Ports					Format		SNMP		Page
		Industrial Ethernet	10 Mbps Ethernet	100 Mbps Ethernet	1000 Mbps Ethernet	2.4 Gbps Ethernet	Protocol Independent *	T1/E1/J1	DS3/E3/STS-1	WDM	Fiber	Copper (RJ-45)	PoE (RJ-45)	SFP	Coaxial (BNC)	Standalone	Modular	Managed	Unmanaged	
FTTx	IE-MultiWay	•	•	•	•						•	•		•		•		•		4
	AccessEtherLinX **		•	•							•	•				•		•		5
	Giga-AccessEtherLinX-II		•	•	•						•	•		•		•		•		6
	iMcV-FiberLinX-II **		•	•							•	•		•			•	•		7
	iMcV-Giga-FiberLinX-II **		•	•	•						•	•		•			•	•		8
	IE-MiniFiberLinX-II **	•	•	•							•	•	•			•	•	•		9
	IE-MiniFiberLinX-II/Telco	•	•	•							•	•	•			•	•	•		10
	IE-MiniFiberLinX-II/LastGasp	•	•	•							•	•	•			•	•	•		11
Media Conversion	MiniMc, MiniMc SFP **		•	•							•	•		•		•	•		•	12
	Giga-MiniMc, Giga-MiniMc SFP, Giga MiniMc LFPT, MiniMc-Gigabit		•	•	•						•	•	•	•		•	•		•	13
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	IE-MiniMc/Telco, IE-MiniMc/Telco-LastGasp	•	•	•							•	•				•	•		•	15
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	iMcV-Gigabit, IE-iMcV-Gigabit	•			•						•	•		•			•	•		29
	IE-iMcV-MediaLinX, iMcV-MediaLinX**, iMcV-Giga-MediaLinX **	•	•	•							•	•		•			•	•		30
	iMcV-T1/E1/J1 Repeater, IE-iMcV-T1/E1/J1 LineTerm	•						•			•	•					•	•		31
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* Protocol Independent ranges from 10 Mbps to 1.25 Gbps
** Rate conversion option available

Autocross

Autocross allows for automatic detection of the correct MDI / MDIX configuration on the copper ports (RJ-45), eliminating the need to specify different cables (crossover or straight-through) and thus eliminating another step in troubleshooting.

Auto Negotiation

Auto Negotiation allows devices to automatically assign the most efficient line speed (10/100/1000 Mbps) and mode (Full-Duplex or Half-Duplex) for a particular network segment between two devices.

Coarse Wave Division Multiplexing

Coarse Wave Division Multiplexing (CWDM) uses uncooled lasers to combine multiple wavelengths (four, eight or 16; from 1310 nm to 1610 nm) onto a single fiber, using an ITU standard 20 nm spacing between the wavelengths. Adding wavelengths to the same fiber increases capacity, making CWDM technology a sound choice for large networks such as Gigabit Ethernet and Fibre Channel-based Metropolitan Area Networks (MAN).

Config Control

Configuration Control has been implemented on select iMcV-Modules. Its main function is to assist the end-user by retaining the latest configuration regardless of how the initial configuration was setup, whether through DIP Switch settings or the SNMP Management Module's configuration.

FiberAlert

FiberAlert minimizes the problems associated with the loss of one strand of fiber. If a strand is unavailable, the device at the receiver end notes the loss of link. The device will then stop transmitting on the fiber until a signal or link pulse is received. The result is that the link LED on BOTH sides of the fiber connection will go out indicating a fault somewhere in the fiber loop.

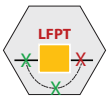
Industrial Ethernet / Equipment (IE)

IE stands for "Industrial Ethernet" and refers to B&B Electronics' designation for products that have been designed to operate in a wider temperature range rather than the typical 0°C to +40°C. B&B Electronics' "IE" products contain additional features designed for industrial applications, such as multiple powering options and DIN clips. IE temperature ranges vary, so check the product specifications for more details.

IE products require third party enclosures for outdoor installations or protection from moisture, dust and other harsh environmental factors. External protection is also required for lightning or other serious power surges.

Last Gasp

The Last Gasp feature available on select B&B Electronics modules allows for one final health status message to be sent when remote modules lose power, notifying network operators that a field visit is necessary.



Link Fault Pass-Through (LFPT)

LFPT (Link Fault Pass-Through) – A feature that allows a segment of a network, divided by a media converter, to act as if it was one physical piece of media. It does this by passing a link fault from one side of the media converter to the other. If a link is lost on one side of the media converter the converter forces a link fault on the other.

LinkLoss

LinkLoss is a troubleshooting feature that works on either the twisted pair port (TP/TX) or the fiber port (FO/FX) of devices which have at least one of each port type. When a fault occurs on one segment of a conversion, LinkLoss detects the fault and passes this information to the other segment. For example, if a media converter is not receiving a fiber link, FO/FX LinkLoss disables the transmitter on the media converter's twisted pair port. This results in a loss of link on the remote twisted pair device.

Managed Products

B&B Electronics offers several products that support SNMP management, allowing operators to proactively manage and monitor their devices from a remote location.

On Board SNMP Management

B&B Electronics offers "intelligent" products with on board SNMP management, allowing operators to proactively manage and monitor the devices without an additional management controller.

Power Over Ethernet (PoE)

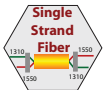
Power Over Ethernet (PoE) is a standards based (IEEE 802.3af) method of delivering power over twisted-pair network cables (RJ-45) along with data, thus eliminating the need for a separate run for a power source. There are two types of PoE devices: the Power Sourcing Equipment (PSE) and the Powered Device (PD). The PSE supplies power to the PD.

Q-in-Q

Q-in-Q, also known as Extra-Tagging, is an IEEE 802.1Q compliant method of assigning a VLAN tag to already tagged network traffic. Q-in-Q enables the transmission of data across multiple VLANs without altering the original data, providing safer and more secure transmission of data packets over the network.

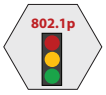
RoHS

With environmental protection becoming more important across the globe, B&B Electronics has taken a leadership position by designing products that are free of lead, cadmium and 6 other toxic materials. This makes the products of B&B Electronics compliant with the Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (RoHS), passed into law by the European Union. All part numbers starting with "8" are RoHS compliant.



Single-Strand Fiber

Single-Strand Fiber technology allows two wavelengths to share one fiber strand. Full-Duplex data travels on different wavelengths (1310 nm and 1550 nm) which effectively doubles the capacity of installed fiber. Since single-strand fiber products use optics that transmit and receive on two different wavelengths, single-strand fiber products must be deployed in pairs. The pair can consist of two IMC or third-party products that conform to the same IMC standard.



Traffic Prioritization

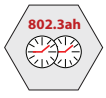
Traffic Prioritization (IEEE 802.1p) provides advanced packet management of network traffic by assigning a priority ID to each packet, insuring that high-priority traffic (such as VoIP) receives the network resources and bandwidth necessary for high Quality of Service (QoS).

Unified Management Agent (UMA)

The Unified Management Agent (UMA) is a proprietary system developed by B&B Electronics to utilize a separate management domain on the network in order to keep management and other data separate. UMA is an IP-less management method which simplifies management of supported devices by reducing the number of IP addresses.

VLAN Tagging

VLAN Tagging (IEEE 802.1Q) involves assigning identification information to data packets on a network to insure that data is efficiently and correctly routed between devices. The VLAN tag includes an EtherType, priority bits and a VLAN ID that allows each packet to remain secure and intact while being routed across multiple networks.



Administration and Maintenance

IEEE 802.3ah OAM includes features associated with Discovery, Link Monitoring, Events, Remote Loopback and Performance Monitoring and Reporting. B&B Electronics' implementation of 802.3ah supports both Active and Passive operational modes on all ports and software upgrades are Free to B&B Electronics clients.

IE-MultiWay

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

The Most Compact, Versatile, Managed CPE Ethernet FTTx Device on the Market. Providing Solutions For:

- **Managed Fiber Termination**
- **Fiber Drop & Insert**
- **Fiber Repeater**
- **Mode Conversion**
- **Dual Independent Media Conversion**

Product Overview

The IE-MultiWay is a value-based, Carrier-class Ethernet, FTTx solution that is ideal for use as a CPE device at the customer's network edge as well as in a fiber infrastructure. The IE-MultiWay comes standard with two SFP uplink ports for the providers' network connection and two 10/100/1000Base-T copper ports.

There are four distinct DIP Switch selectable configurations that the IE-MultiWay supports. Among them are a 1+1 Uplink Protection Switch, a 4-Port Switch, and a Dual Copper to Fiber SFP Media/ Mode Converter (two gigabit fiber media converters in one).

As a 4-port device, it can be employed with fiber redundancy (with or without 1+1 uplink protection) and status monitoring with management on all ports via OAM, for mission-critical applications. It also can be deployed as a dual 10/100/1000 Mbps copper to fiber media converter and be utilized as two separate converters.

The IE-MultiWay supports 10/100/1000 Mbps and 1 Gbps copper and 100 Mbps and 1 Gbps optical SFP modules, to provide greater flexibility in the network environment. The hot-swappable nature of the SFPs and the numerous fiber modes and types that are available allow for easy configuration and future upgrading as network demands evolve. For added control, DDMI is supported via the CLI for optical SFPs.

Local management is achieved through the serial port, which allows users to launch a serial session through the CLI. Commands such as interface statistics, RMON statistics, and OAM status and control are a few of the accessible features.

Features

Flexible Solution

- Copper to fiber SFP media converter
- Dual-independent copper to fiber SFP media converter(s)
- Fiber repeater
- SFP to SFP mode converter with copper drops (Re-amplify, Re-shape, Re-time)
- 4-Port Gigabit Switch
- 1+1 uplink protection (< 50 mSec)
- Supports per port service VLAN
- Supports daisy chain expansion
- Supports RMON Statistics
- Supports Jumbo Frames (up to 10240 bytes)
- -48V DC terminal for Telco applications
- Powering options can be combined for AC/DC redundancy

Advanced Remote Monitoring/Management

- Supports IEEE 802.3ah OAM (active/ passive), 802.1ag CFM (Connectivity Fault Management) and Y.1731 on all Ports
- Discovery, Link Monitoring, Performance Monitoring and Remote Loopback
- Bandwidth Limiting with burst capability and priority queuing
- Rate limiting can be done at Layer 1, 2 or 3
- Via UMA, can act as a Remote when connected to a Host iMcV-Giga-FiberLinX-II
- Generates SNMP TRAPs based on events
- RS-232 CLI (Command Line Interface) console port

SFP Support

- Auto negotiate speed and flow control for 10/100/1000 copper SFPs with SGMII
- Supports fixed speed 1 Gbps full-duplex copper SFPs
- Auto detect for 100 or 1000 optical SFPs

"Industrial Ethernet" (IE) Features For Operation in Extended Temperatures

- Extended temperature functionality, up to -40° to +85° C
- Multiple power options: AC, DC and USB

Physical Specifications

Connectors:
RJ-45, SFP

Regulatory Approvals:
- FCC Class A (Using 48V Telco-type power)
- FCC Class B (Using all other power options)
- UL/cUL, CE

Operating Temperature:
+14° to +122° F (-10° to +50° C)
w/ Franmar AC Wall Adapter;
-40° to +185° F (-40° to +85° C)
w/ DC Configuration;

Storage Temperature:
-49° to +185° F (-45° to +85° C);

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.86"H x 3.66"W x 3.88"D (2.2 x 9.38 x 9.94 cm)

Supply Voltage:
5 to 24 VDC (Barrel)
48 VDC Telco (Terminal)

Power Information:*
Min: 3.15W (1 optic SFP [1 Gbps], 1 Tx [100 Mbps])
Max: 7.0W (2 Cu SFP [1 Gbps], 2 Tx [1 Gbps])
* Power consumption is based on SFP types

Shipping Weight:
1.0 lbs (0.45 kg)

Also Available in a modular, chassis based version.
See page 36 for details.

Ordering Information

* IE-MultiWay

858-11121	IE-MultiWay, 2TX/2SFP w/ AC to DC Power Adapter Varies
854-11121	IE-MultiWay, 2TX/2SFP w/o AC to DC Power Adapter Varies

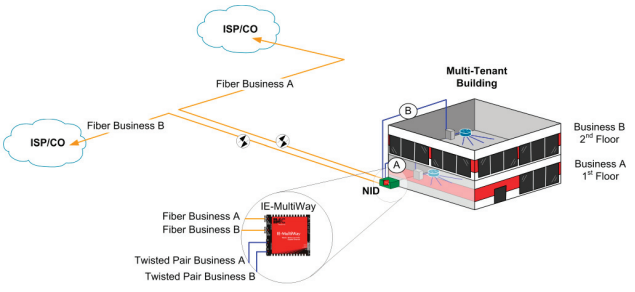
Available Accessories

806-39753	IE-Power/5V, AC to DC (DIN Rail) Power Adapter (-20° to +70° C)
806-39105	DIN Rail Clip
806-39638	Double-USB Power Cable, 36"
825-39951	Serial Cable, MiniJack to DB9 (female)
895-39229	Wall Mount Bracket

Wall Mount Bracket

Application Example

Conversion of copper to fiber optic cabling for distance extension from the multi-tenant's dwelling to the ISP's central office is commonly used today. Data services are then distributed through fiber optic cabling via copper to Clients living in the building so Clients are able to gain access to the internet at greater speeds. Using B&B Electronics' IE-MultiWay dual media converter option, ISP's can support two independent fiber-to-copper lines using a single device, saving equipment cost while providing the Clients with independent higher speed data services.



Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | V-LAN Tagging | Last Gasp

AccessEtherLinX/4

Managed multi-port optical demarcation devices combining media conversion with advanced capabilities.

Product Overview

The AccessEtherLinX/4 enables service providers to offer differentiated, bandwidth-scalable data or "Transparent LAN" services to multi-tenant buildings and business customers. Residing at the customer premises, the AccessEtherLinX/4 provides a VLAN-based, Layer 2 entry point to the last mile fiber network, trunking, differentiating and separating customer traffic.

The AccessEtherLinX/4 features SNMP management, bandwidth control, VLAN tagging, traffic prioritization and IGMP multicast pruning/snooping with support for 4 customer ports. It provides an ideal and cost effective solution for delivering Ethernet-based services to business customers.

Choose from a variety of brackets and rackmounting options for easy installation.

Features

- Fiber or copper uplink options
- Independent RJ-45 ports for flexible configurations
- Easy to configure and manage with GUI-based iView²
- Can be managed using Telnet
- Includes DHCP and TFTP client
- Includes SNMP V2c
- Read/write IEEE 802.1Q VLAN-tags
- Bi-directional bandwidth control
- IEEE 802.3x compliant for Flow Control
- QoS – IEEE 802.1p-based packet prioritization
- Includes loopback test modes
- MAC address learning
- Includes LinkLoss and FiberAlert
- Selective Advertising
- Half and Full-Duplex operation
- Remote management and upgrades
- Supports IGMP multicast pruning/snooping

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber and CWDM fiber wavelengths
- AutoCross for automatic MDI-II/MDI-X switching

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, UL/cUL, CSA, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
1.5" H x 4.75" W x 7.25" D
(3.18 cm x 12.07 cm x 18.42 cm)

Power Rating
100-240V AC, 50/60Hz, 1A

Shipping Weight:
1.6 lbs. (0.6 kg)

Ordering Information

852-13120	AccessEtherLinX, TX/4 + TX, 100 m
852-13121	AccessEtherLinX, TX/4 + FX-MM1300-ST, 5 km
852-13122	AccessEtherLinX, TX/4 + FX-MM1300-SC, 5 km
852-13123	AccessEtherLinX, TX/4 + FX-SM1310/PLUS-ST, 40 km
852-13124	AccessEtherLinX, TX/4 + FX-SM1310/PLUS-SC, 40 km
852-13125	AccessEtherLinX, TX/4 + FX-SM1310/LONG-ST, 80 km
852-13126	AccessEtherLinX, TX/4 + FX-SM1310/LONG-SC, 80 km
852-13127	AccessEtherLinX, TX/4 + FX-SM1550/LONG-SC, 80 km
852-13130	AccessEtherLinX, TX/4 + FX-SM1550/XLONG-SC,100 km
Single-Strand Fiber	
852-10133	AccessEtherLinX, TX/4 + SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
852-10134	AccessEtherLinX, TX/4 + SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
852-10135	AccessEtherLinX, TX/4 + SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
852-10136	AccessEtherLinX, TX/4 + SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
852-10137	AccessEtherLinX, TX/4 + SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
852-10138	AccessEtherLinX, TX/4 + SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

CWDM versions available,
See website for details

Available Accessories

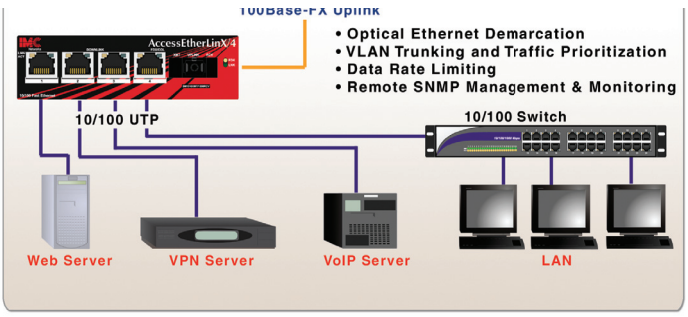
895-39226	Rackmount bracket
895-39949	Rackmount shelf

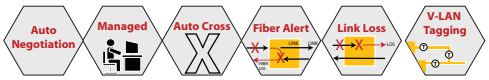
Rackmount bracket

Rackmount shelf

Application Example

For residential and commercial fiber services, install the AccessEtherLinX/4 inside the customer premises to provide a demarcation point between the customer and service provider networks.





Giga-AccessEtherLinX-II

6-YEAR Comprehensive Warranty

A Managed Optical Demarcation device offering advanced "Multi-Tenant" capabilities unique to multi-port Ethernet-based CPE.

Product Overview

The Giga-AccessEtherLinX-II enables service providers to offer differentiated "Transparent LAN" services to multi-tenant building and business customers without the need for costly remote routers. Residing at the customer premises, the Giga-AccessEtherLinX-II provides a VLAN-based, Layer 2 entry point to the last mile fiber network to support trunking, differentiating and separating customer traffic. Featuring SNMP management with per-port 802.1Q VLAN, 802.1p QoS, traffic prioritization, bandwidth control and multicast pruning/snooping (using IGMP v1, v2), the Giga-AccessEtherLinX-II is perfect for a wide range of Fiber-to-the-Home, Fiber-to-the-Curb and Fiber-to-the-Business (FTTx) services, and is an ideal solution for delivering Ethernet-based services to customers quickly and cost effectively. Designed with a small footprint, the Giga-AccessEtherLinX-II facilitates easy installation inside the premises. It features four 10/100/1000 twisted pair Ethernet downlink ports (for connecting users/ LANs), with either a 1000Base-FX fiber or SFP uplink port, and is powered from an internal AC or DC power supply.

The Giga-AccessEtherLinX-II includes per-port bandwidth control and is 802.1Q VLAN compatible.

The Giga-AccessEtherLinX-II accepts traffic containing VLAN tags on the Uplink port and directs that traffic to the twisted pair downlink ports based on the VLAN ID. In addition to assigning 802.1Q VLAN-tags on a per-port basis, users can also "Qualify" the different VLAN TAGS to assign based on the DiffServ or PRI value of the incoming frame. Traffic priority for each port is supported with hi/low prioritization queues. The Giga-AccessEtherLinX-II includes per port bi-directional bandwidth control, and supports IGMP multicast pruning which ensures only the necessary amount of IP multicast packets are bridged.

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Features

- 802.1Q VLAN-tags on a per-port basis, based on DiffServ or PRI values
- QoS – 802.1p-based packet prioritization
- Allows configuration via GUI, Telnet or serial port
- Remote management and upgrades
- Per-port bi-directional bandwidth control
- Supports IGMP multicast pruning
- RMON traffic statistics
- Lowers the cost of provisioning fiber services
- SNMP-Manageable
- Supports remote "IP-Less" management when connected to a iMcV-Giga-FiberLinX-II
- All management traffic remains isolated from the remote LAN
- IEEE 802.1Q VLAN and 802.1p compliant
- VLAN-tagging and Q-in-Q (double-tagging) segregates customer traffic
- Up and running in less than five minutes
- Includes RMON statistics
- TRAP notification capability
- SNMP V1 and V2c compatible

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber and CWDM fiber wavelengths
- AutoCross for automatic MDI-II/MDI-X switching

Connectors:
RJ-45, SC and SFP

Regulatory Approvals:
FCC Class B, UL/cUL, CSA, CE

Operating Temperature:
+32° to 122° F (0° to +50° C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

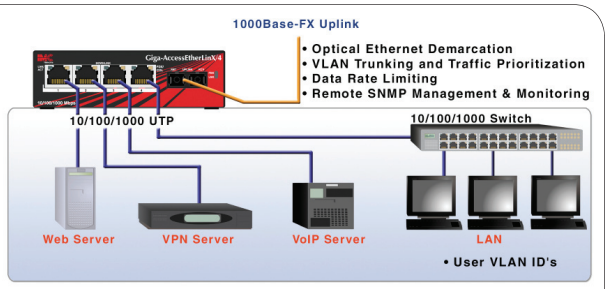
Dimensions
1.64" H x 5.64" W x8.95" D
(4.2 cm x 14.3 cm x 22.7 cm)

Power Requirements
100-240V AC, 50/60Hz, 0.5/0.25A for AC
48V DC, 0.5A for DC

Shipping Weight:
1.6 lbs. (0.6 kg)

Application Example

For residential and commercial fiber services, install the Giga-AccessEtherLinX-II inside the customer premises to provide a bridge between the customer and Service Provider networks, over a point-to-point fiber uplink. Each remote drop can be assigned two unique VLAN tags based on DiffServ or PRI values for easy routing through the network.



Ordering Information

Giga-AccessEtherLinX-II AC Version

852-10302	Giga-AccessEtherLinX-II, TX/4 + SFP (requires one SFP/1250 module), Varies
852-10303	Giga-AccessEtherLinX-II, TX/4 + SX-MM850-SC,220/550 m
852-10304	Giga-AccessEtherLinX-II, TX/4 + LX-SM1310-SC, 15 km
852-10305	Giga-AccessEtherLinX-II, TX/4 + LX-SM1310/PLUS-SC, 40 km
852-10306	Giga-AccessEtherLinX-II, TX/4 + LX-SM1550/LONG-SC, 80 km
852-10307	Giga-AccessEtherLinX-II, TX/4 + LX-SM1550/ XLONG-SC, 100 km
Single-Strand Fiber	
852-10310	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
852-10311	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
852-10312	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
852-10313	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
852-10314	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1310/ PLUS-SC (1310xmt/1550rcv), 40 km
852-10315	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1550/ PLUS-SC (1550xmt/1310rcv), 40 km
852-10316	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1310/ PLUS-SC (1310xmt/1490rcv), 30 km
852-10317	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1490/ PLUS-SC (1490xmt/1310rcv), 30 km
852-10318	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1490/ LONG-SC (1490xmt/1550rcv), 70 km
852-10319	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1550/ LONG-SC (1550xmt/1490rcv), 70 km

Giga-AccessEtherLinX-II DC Version

852-32302	Giga-AccessEtherLinX-II, TX/4 + SFP (requires one SFP/1250 module), Varies
852-32303	Giga-AccessEtherLinX-II, TX/4 + SX-MM850-SC, 220/550 m
852-32304	Giga-AccessEtherLinX-II, TX/4 + LX-SM1310-SC, 15 km
852-32305	Giga-AccessEtherLinX-II, TX/4 + LX-SM1310/PLUS-SC, 40 km
852-32306	Giga-AccessEtherLinX-II, TX/4 + LX-SM1550/LONG-SC, 80 km
852-32307	Giga-AccessEtherLinX-II, TX/4 + LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
852-32310	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
852-32311	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
852-32312	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
852-32313	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
852-32314	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
852-32315	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
852-32316	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
852-32317	Giga-AccessEtherLinX-II, TX/4 + SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
852-32318	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
852-32319	Giga-AccessEtherLinX-II, TX/4 + SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km

CWDM versions available, See website for details

Available Accessories
See page 5

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | V-LAN Tagging

iMcV-FiberLinX-II

* SFPs Sold Separately

Optical demarcation module enabling delivery of transparent LAN services over fiber with integrated media conversion, carrier-grade remote management and line provisioning capabilities.

Product Overview

The iMcV-FiberLinX-II solution connects two remote networks over fiber optics and allows administrators to observe both the end-points and the fiber link between them, as single management entities and not as separate elements. Host management traffic is not visible to the remote or customer network nor is access to the customer network required, guaranteeing end-to-end data integrity.

The iMcV-FiberLinX-II can be configured remotely, can alert administrators to any potential problems on the long-haul fiber run, can provide vital information on link condition and can report data traffic statistics.

The iMcV-FiberLinX-II end points and fiber link can be managed as a single entity, allowing remote configuration and fault alerts to network administrators. As a copper-to-fiber media converter, it allows low-cost copper switches to connect to the fiber line. Offering unparalleled flexibility, the iMcV-FiberLinX-II supports multiple fiber types including multi-mode and single-mode as well as single-strand fiber, doubling the capacity of installed fiber. Coarse Wavelength Division Multiplexing (CWDM) functionality is also an option.

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Features

- Transparency feature allows VLAN/non-VLAN traffic on the same port
- Provides differential priority
- Set bi-directional bandwidth
- Remotely configure settings
- Last Gasp SNMP trap
- Easy to configure and manage with GUI-based iView²
- Includes RJ-45 management port
- Manage/monitor fiber traffic
- Includes RMON statistics
- SNMP V1 and V2c compatible
- Supports the Unified Management Agent (UMA)
- Receive vital health information
- Q-in-Q/Extra-Tagging
- Supports 802.3ah OAM (Operation, Administration & Management)

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber, CWDM fiber and SFP

Connectors:
RJ-45, ST, SC and SFP

Regulatory Approvals:
FCC Class A, UL/cUL, CE, CSA, CB

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
0° to +160°F (-20° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Power Consumption:
.850mA at 3.3V DC

Shipping Weight:
0.30 lbs (0.11 kg)

Ordering Information

* iMcV-FiberLinX-II, SFP port(s)

856-14500	iMcV-FiberLinX-II, TX/SFP, SFP Variable (requires one SFP/155-ED Module)
856-14501	iMcV-FiberLinX-II, SFP/SFP, SFP Variable (requires two SFP/155-ED Module)

iMcV-FiberLinX-II, TX/TX

856-14010	iMcV-FiberLinX-II, TX/TX, 100 m

iMcV-FiberLinX-II, TX/FX

856-14011	iMcV-FiberLinX-II, TX/FX-MM1300-ST, 5 km
856-14012	iMcV-FiberLinX-II, TX/FX-MM1300-SC, 5 km
856-14015	iMcV-FiberLinX-II, TX/FX-SM1310/PLUS-ST, 40 km
856-14016	iMcV-FiberLinX-II, TX/FX-SM1310/PLUS-SC, 40 km
856-14017	iMcV-FiberLinX-II, TX/FX-SM1310/LONG-ST, 80 km
856-14018	iMcV-FiberLinX-II, TX/FX-SM1310/LONG-SC, 80 km
856-14021	iMcV-FiberLinX-II, TX/FX-SM1550/LONG-SC, 80 km
856-14022	iMcV-FiberLinX-II, TX/FX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-14039	iMcV-FiberLinX-II, TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
856-14040	iMcV-FiberLinX-II, TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
856-14043	iMcV-FiberLinX-II, TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
856-14044	iMcV-FiberLinX-II, TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
856-14045	iMcV-FiberLinX-II, TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-14046	iMcV-FiberLinX-II, TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-14047	iMcV-FiberLinX-II, TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
856-14048	iMcV-FiberLinX-II, TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

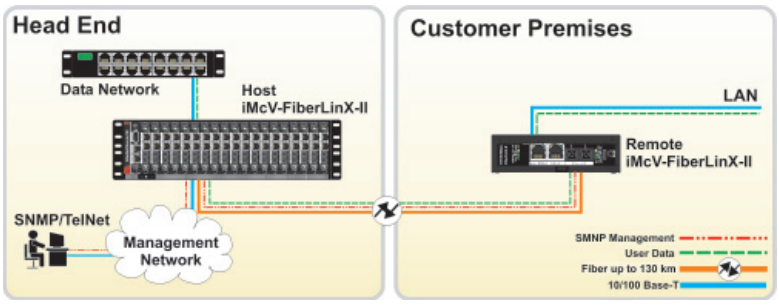
CWDM versions available, See website for details

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

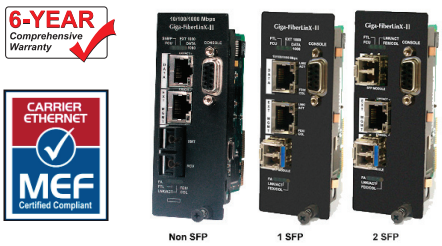
Application Example

When used in pairs, a module configured as a Host resides at the head-end while another module, configured as a Remote, installs at the remote customer location (typically on the network edge where the customer network meets the service provider infrastructure). Using SNMP, the iMcV-FiberLinX-II solution monitors the entire link and ensures data integrity while remaining isolated and completely transparent to the customer LAN.



Auto Negotiation · Managed · Auto Cross · Fiber Alert · Link Loss · Q-in-Q · V-LAN Tagging · UMA 1 IP Address · Last Gasp

iMcV-Giga-FiberLinX-II



* SFPs Sold Separately

An optical demarcation unit enabling delivery of transparent LAN services while providing carrier-grade management and line provisioning capabilities.

Product Overview

Service providers who provide Transparent LAN services must be able to remotely manage their customer premises equipment while keeping management and customer data traffic separated. The iMcV-Giga-FiberLinX-II provisions point-to-point fiber optic connections and provides a unique management tool to the entire link between two locations.

Field-proven worldwide since 1999, the iMcV-Giga-FiberLinX-II system is ideal for Optical Ethernet, FTTx and campus area network applications.

The iMcV-Giga-FiberLinX-II solution connects two remote networks over fiber optics and allows administrators to observe both the end-points, and the fiber link between them, as single management entities and not as separate elements. Host management traffic is not visible to the remote or customer network nor is access to the customer network required, guaranteeing end-to-end data integrity. The iMcV-Giga-FiberLinX-II allows for remote configuration and alerts administrators to any potential problems on the long-haul fiber run. It also functions as a copper-to-fiber media converter, allowing deployment of lower cost copper switches at both ends of the fiber connection.

Offering unparalleled flexibility, iMcV-Giga-FiberLinX-II supports multiple fiber types as well as single-strand fiber which can effectively double the capacity of installed fiber. The iMcV-Giga-FiberLinX-II module installs in a standard B&B Electronics iMediaChassis series or MediaChassis/2.

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Features

- VLAN-tagging and Q-in-Q (Extra Tagging) segregates customer traffic
- IEEE 802.1Q VLAN and 802.1p compliant
- Transparency feature allows VLAN/non-VLAN traffic on the same port
- Provides differential priority
- Remotely configure settings
- Easy to configure and manage with GUI-based iView²
- Includes RJ-45 management port
- Manage/monitor fiber traffic
- Includes RMON statistics
- SNMP V1 and V2c compatible
- Supports the Unified Management Agent (UMA)
- Supports 802.3ah OAM (Operation, Administration & Management)

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber, CWDM fiber and SFP

Connectors:
RJ-45, ST, SC and SFP

Regulatory Approvals:
FCC Class A, UL/cUL, CE, CSA, CB

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
Double-wide module

Power Consumption:
850mA at 3.6V DC

Shipping Weight:
0.8 lbs (0.36 kg)

Ordering Information

* iMcV-Giga-FiberLinX-II, SFP port(s)

856-14760	iMcV-Giga-FiberLinX-II, TX/SFP (requires one SFP/1250-ED Module)
856-14761	iMcV-Giga-FiberLinX-II, SFP/SFP (requires two SFP/1250-ED Module)

iMcV-Giga-FiberLinX-II, SX/LX

856-14869	iMcV-Giga-FiberLinX-II, TX/SX-MM850-SC, 220/550 m
856-14870	iMcV-Giga-FiberLinX-II, TX/LX-SM1310-SC, 15 km
856-14871	iMcV-Giga-FiberLinX-II, TX/LX-SM1310/PLUS-SC, 40 km
856-14872	iMcV-Giga-FiberLinX-II, TX/LX-SM1550/LONG-SC, 80 km
856-14881	iMcV-Giga-FiberLinX-II, TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-14873	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
856-14874	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
856-14890	iMcV-Giga-FiberLinX-II, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
856-14891	iMcV-Giga-FiberLinX-II, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
856-14875	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-14876	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-14892	iMcV-Giga-FiberLinX-II, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
856-14893	iMcV-Giga-FiberLinX-II, TX/SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
856-14877	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
856-14878	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km
856-14879	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1490/XLONG-SC, (1490xmt/1550rcv), 80 km
856-14880	iMcV-Giga-FiberLinX-II, TX/SSLX-SM1550/XLONG-SC, (1550xmt/1490rcv), 80 km

Available Accessories

825-39950	Serial Cable

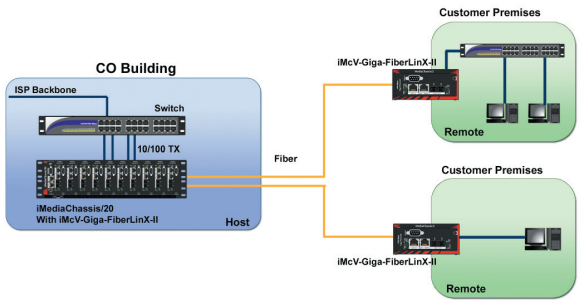
CWDM versions available, See website for details

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Application Example

When used in pairs, a module configured as a Host resides at the head-end while another module, configured as a Remote, installs at the remote customer location (typically on the network edge where the customer network meets the service provider infrastructure). Using SNMP, the iMcV-Giga-FiberLinX-II solution monitors the entire link and ensures data integrity while remaining isolated and completely transparent to the customer LAN.



Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | Q-in-Q | V-LAN Tagging | UMA 1 IP Address | 802.3ah

IE-MiniFiberLinX-II

Compact fiber optic CPE for industrial-grade delivery over fiber, with media conversion, carrier grade management and line provisioning capabilities.

Product Overview

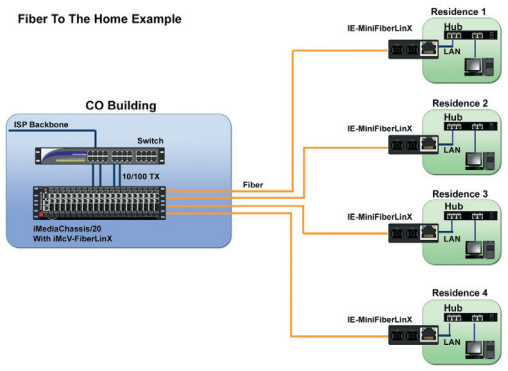
The compact IE-MiniFiberLinX-II provides point-to-point fiber optic connections with a unique management tool to monitor the entire link between two locations. IE-MiniFiberLinX-II CPE for fiber optic networks allows service providers to deliver "triple-play" voice, video and data services to customer premises.

As a copper-to-fiber converter, the IE-MiniFiberLinX-II supports multiple fiber types including multi-mode, single-mode, single-strand fiber (SSF), and Course Wavelength Division Multiplexing (CWDM) functionality to increase the capacity of existing fiber. It allows for remote configuration, provides vital alerts to network administrators, and can manage the CPE and fiber link as a single entity.

Equipped with one 100 Mbps fiber data port, one 10/100 twisted pair port for data and management, as well as an auxiliary port designed to function as a serial port (when used with the included adapter), the IE-MiniFiberLinX-II also offers multiple powering options: AC power (with included adapter), DC (through a 4-terminal power block), as well as Power over Ethernet, acting as a Powered Device (PD) to draw power when connected to 802.3af compliant Power Sourcing Equipment (PSE).

Combining copper-to-fiber conversion, extended temperature performance, plug-and-play operation, miniature size and multiple power options, the IE-MiniFiberLinX-II is one of the most versatile fiber optic CPE devices available.

Application Example



Features

- Loopback troubleshooting
- Power options: AC, DC and 802.3af Power over Ethernet (PoE)
- Preserves complete end-to-end fiber connection integrity
- Includes bi-directional bandwidth control
- Read/write IEEE 802.1Q VLAN-tags
- QoS: IEEE 802.1p-based packet prioritization (2 queues [high/low] with 8 levels of priority)
- Layer 2 packet switching, store and forward operation
- Forwarding rate: 14,880pps for 10 Mbps; 148,800pps for 100 Mbps;
- MTU: Supports over-sized packets up to 1536 bytes
- SNMP V1 and V2c compatible
- Managed via Telnet
- IEEE 802.3x Flow Control
- Includes DHCP and TFTP clients
- Supports the Unified Management Agent (UMA)
- IEEE 802.3 10Base-T twisted pair
- IEEE 802.3u 100Base-TX twisted pair
- IEEE 802.3u 100Base-FX or SX fiber
- Supports passive 802.3ah OAM (Operation, Administration & Management)

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber, CWDM fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class A, UL/cUL, CE, CSA, CB

Operating Temperature:
-4° to +167°F (-20° to +75°C) DC Configuration
+32° to +122°F (0° to +50°C) with AC wall adapter

Storage Temperature:
-49° to +185°F (-45° to +85°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.85"H x 1.83"W x 3.38"D (2.15 x 4.64 x 8.58 cm)

Power Rating:
AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz 5V DC output at 10W, 2.0A
DC Input: 7 to 50V DC, 1A-0.1A

Shipping Weight:
0.30 lbs (0.11 kg)

Ordering Information

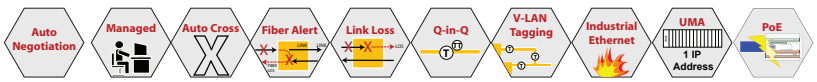
With AC Power Supply

856-19717	IE-MiniFiberLinX-II, TP-TX/FX-MM850-ST, 2 km
856-19718	IE-MiniFiberLinX-II, TP-TX/FX-MM850-SC, 2 km
856-19722	IE-MiniFiberLinX-II, TP-TX/FX-MM1300-ST, 5 km
856-19723	IE-MiniFiberLinX-II, TP-TX/FX-MM1300-SC, 5 km
856-19724	IE-MiniFiberLinX-II, TP-TX/FX-SM1310/PLUS-ST, 40 km
856-19725	IE-MiniFiberLinX-II, TP-TX/FX-SM1310/PLUS-SC, 40 km
856-19726	IE-MiniFiberLinX-II, TP-TX/FX-SM1310/LONG-ST, 80 km
856-19727	IE-MiniFiberLinX-II, TP-TX/FX-SM1310/LONG-SC, 80 km
856-19730	IE-MiniFiberLinX-II, TP-TX/FX-SM1550/LONG-SC, 80 km
856-19728	IE-MiniFiberLinX-II, TP-TX/FX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-19750	IE-MiniFiberLinX-II, TP-TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
856-19751	IE-MiniFiberLinX-II, TP-TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
856-19752	IE-MiniFiberLinX-II, TP-TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
856-19753	IE-MiniFiberLinX-II, TP-TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
856-19754	IE-MiniFiberLinX-II, TP-TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-19755	IE-MiniFiberLinX-II, TP-TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-19756	IE-MiniFiberLinX-II, TP-TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
856-19757	IE-MiniFiberLinX-II, TP-TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Without AC Power Supply

856-19740	IE-MiniFiberLinX-II Module, TP-TX/FX-MM850-ST, 2 km
856-19741	IE-MiniFiberLinX-II Module, TP-TX/FX-MM850-SC, 2 km
856-19732	IE-MiniFiberLinX-II Module, TP-TX/FX-MM1300-ST, 2 km
856-19733	IE-MiniFiberLinX-II Module, TP-TX/FX-MM1300-SC, 2 km
856-19734	IE-MiniFiberLinX-II Module, TP-TX/FX-SM1310/PLUS-ST, 30 km
856-19735	IE-MiniFiberLinX-II Module, TP-TX/FX-SM1310/PLUS-SC, 30 km
856-19736	IE-MiniFiberLinX-II Module, TP-TX/FX-SM1310/LONG-ST, 80 km
856-19737	IE-MiniFiberLinX-II Module, TP-TX/FX-SM1310/LONG-SC, 80 km
Single-Strand Fiber	
856-19760	IE-MiniFiberLinX-II Module, TP-TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
856-19761	IE-MiniFiberLinX-II Module, TP-TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
856-19762	IE-MiniFiberLinX-II Module, TP-TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
856-19763	IE-MiniFiberLinX-II Module, TP-TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
856-19764	IE-MiniFiberLinX-II Module, TP-TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-19765	IE-MiniFiberLinX-II Module, TP-TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-19766	IE-MiniFiberLinX-II Module, TP-TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
856-19767	IE-MiniFiberLinX-II Module, TP-TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

CWDM versions available, See website for details



IE-MiniFiberLinX-II/Telco

Compact fiber optic CPE for industrial-grade delivery over fiber, with media conversion, carrier grade management and line provisioning capabilities.

Product Overview

The compact IE-MiniFiberLinX-II/Telco is one of the most versatile fiber optic NID devices available on the market today. It provides point-to-point fiber optic connections with a unique management tool to monitor the entire link between two locations. IE-MiniFiberLinX-II/Telco was designed to work with -48 VDC power that is compliant with the Bellcore GR-499 specification, supporting the minimum and maximum transient voltages, typically required by transport equipment used in Telco environments. Other key features include; carrier grade remote SNMP management, extra tagging using Q-in-Q, and PoE (Power over Ethernet).

As a copper-to-fiber converter, the IE-MiniFiberLinX-II/Telco supports multiple fiber types including multimode, single-mode, single-strand fiber (SSF), and Course Wavelength Division Multiplexing (CWDM) functionality to increase the capacity of existing fiber. It allows for remote configuration, provides vital alerts to network administrators, and can manage the CPE and fiber link as a single entity.

Equipped with one 100 Mbps fiber data port, one 10/100 twisted pair port for data and management, as well as an auxiliary port designed to function as a serial port (when used with the included adapter), the IE-MiniFiberLinX-II/Telco also offers multiple powering options: AC power (with included adapter), DC (through a 4-terminal power block), as well as Power over Ethernet, acting as a Powered Device (PD) to draw power when connected to 802.3af compliant Power Sourcing Equipment (PSE).

Features

- Loopback troubleshooting
- Power options: AC, DC and 802.3af Power over Ethernet (PoE)
- Preserves complete end-to-end fiber connection integrity
- Includes bi-directional bandwidth control
- Read/write IEEE 802.1Q VLAN-tags
- QoS: IEEE 802.1p-based packet prioritization (2 queues [high/low] with 8 levels of priority)
- Layer 2 packet switching, store and forward operation
- Forwarding rate: 14,880pps for 10 Mbps; 148,800pps for 100 Mbps;
- MTU: Supports over-sized packets up to 1536 bytes
- SNMP V1 and V2c compatible
- Managed via Telnet
- IEEE 802.3x Flow Control
- Includes DHCP and TFTP clients
- Supports the Unified Management Agent (UMA)
- IEEE 802.3 10Base-T twisted pair
- IEEE 802.3u 100Base-TX twisted pair
- IEEE 802.3u 100Base-FX or SX fiber
- Supports passive 802.3ah OAM (Operation, Administration & Management)

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber, CWDM fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class A, UL/cUL, CE, CSA, CB

Operating Temperature:
-49° to +185° F (-45° to +85° C) Telco DC Configuration
+32° to +122°F (0° to +50°C) with AC wall adapter

Storage Temperature:
-49° to +185°F (-45° to +85°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.85"H x 1.83"W x 3.38"D (2.15 x 4.64 x 8.58 cm)

Power Rating:
AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz 5V DC output at 10W, 2.0A
DC Input: 12 to 48 VDC *, 1 to .02A,
* Telco compatible 48 VDC allows for an absolute maximum voltage of 56.5 VDC

Shipping Weight:
0.30 lbs (0.11 kg)

Ordering Information

* Modular versions without AC adapter change the first Part Number to 854 (i.e. 856-17620 becomes 854-17620).

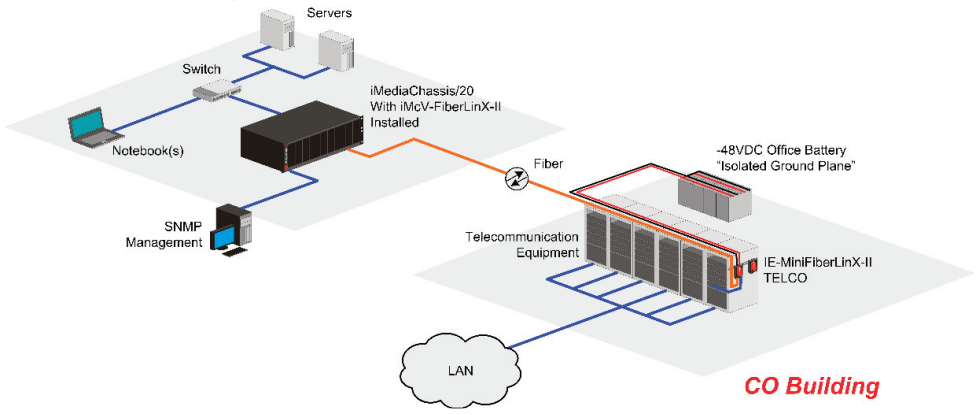
CWDM versions available, See website for details

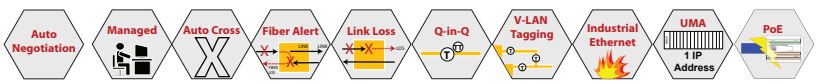
IE-MiniFiberLinX-II/Telco

856-17620	IE-MiniFiberLinX-II/Telco, TP-TX/FX-MM850-ST, (-20°C to +70°C), 2 km
856-17621	IE-MiniFiberLinX-II/Telco, TP-TX/FX-MM850-SC, (-20°C to +70°C), 2 km
856-17622	IE-MiniFiberLinX-II/Telco, TP-TX/FX-MM1300-ST, 5 km
856-17623	IE-MiniFiberLinX-II/Telco, TP-TX/FX-MM1300-SC, 5 km
856-17624	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1310-ST, 10 km
856-17625	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1310-SC, 10 km
856-17626	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1310/PLUS-ST, 30 km
856-17627	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1310/PLUS-SC, 30 km
856-17628	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1310/LONG-ST, 80 km
856-17629	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1310/LONG-SC, 80 km
856-17630	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1310/XLONG-SC, 100 km
856-17631	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1550/LONG-SC, 80 km
856-17632	IE-MiniFiberLinX-II/Telco, TP-TX/FX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-17640	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
856-17641	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
856-17642	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
856-17643	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
856-17644	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-17645	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-17646	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
856-17647	IE-MiniFiberLinX-II/Telco, TP-TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Application Example

ISP/Customer Facility





IE-MiniFiberLinX-II/LastGasp

Compact fiber optic CPE for industrial-grade delivery over fiber, with media conversion, carrier grade management and line provisioning capabilities.

Product Overview

The compact IE-MiniFiberLinX-II/LastGasp is one of the most versatile fiber optic NID devices available on the market today. It provides point-to-point fiber optic connections with a unique management tool to monitor the entire link between two locations. IE-MiniFiberLinX-II/Last Gasp was designed to work with -48 VDC power that is compliant with the Bellcore GR-499 specification, supporting the minimum and maximum transient voltages, typically required by transport equipment used in Telco environments. Additionally, the product offers Last Gasp, a Trap notification feature that identifies when the power lines are down or of a possible power supply failure. Other key features include; carrier grade remote SNMP management, extra tagging using Q-in-Q, and PoE (Power over Ethernet).

As a copper-to-fiber converter, the IE-MiniFiberLinX-II/LastGasp supports multiple fiber types including multimode, single-mode, single-strand fiber (SSF), and Course Wavelength Division Multiplexing (CWDM) functionality to increase the capacity of existing fiber. It allows for remote configuration, provides vital alerts to network administrators, and can manage the CPE and fiber link as a single entity.

Equipped with one 100 Mbps fiber data port, one 10/100 twisted pair port for data and management, as well as an auxiliary port designed to function as a serial port (when used with the included adapter), the IE-MiniFiberLinX-II/LastGasp also offers multiple powering options: AC power (with included adapter), DC (through a 4-terminal power block), as well as Power over Ethernet, acting as a Powered Device (PD) to draw power when connected to 802.3af compliant Power Sourcing Equipment (PSE).

Features

- Loopback troubleshooting
- Power options: AC, DC and 802.3af Power over Ethernet (PoE)
- Preserves complete end-to-end fiber connection integrity
- Includes bi-directional bandwidth control
- Read/write IEEE 802.1Q VLAN-tags
- QoS: IEEE 802.1p-based packet prioritization (2 queues [high/low] with 8 levels of priority)
- Layer 2 packet switching, store and forward operation
- Forwarding rate: 14,880pps for 10 Mbps; 148,800pps for 100 Mbps;
- MTU: Supports over-sized packets up to 1536 bytes
- SNMP V1 and V2c compatible
- Managed via Telnet
- IEEE 802.3x Flow Control
- Includes DHCP and TFTP clients
- Supports the Unified Management Agent (UMA)
- IEEE 802.3 10Base-T twisted pair
- IEEE 802.3u 100Base-TX twisted pair
- IEEE 802.3u 100Base-FX or SX fiber
- Supports passive 802.3ah OAM (Operation, Administration & Management)

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber, CWDM fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class A, UL/cUL, CE, CSA, CB

Operating Temperature:
-49° to +185° F (-45° to +85° C) Telco DC Configuration
+32° to +122°F (0° to +50°C) with AC wall adapter

Storage Temperature:
-49° to +185°F (-45° to +85°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.85"H x 1.83"W x 3.38"D (2.15 x 4.64 x 8.58 cm)

Power Rating:
AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz 5V DC output at 10W, 2.0A
DC Input: 12 to 48 VDC *, 1 to .02A,
* Telco compatible 48 VDC allows for an absolute maximum voltage of 56.5 VDC

Shipping Weight:
0.30 lbs (0.11 kg)

Ordering Information

* Modular versions without AC adapter change the first Part Number to 854 (i.e. 856-17720 becomes 854-17720).

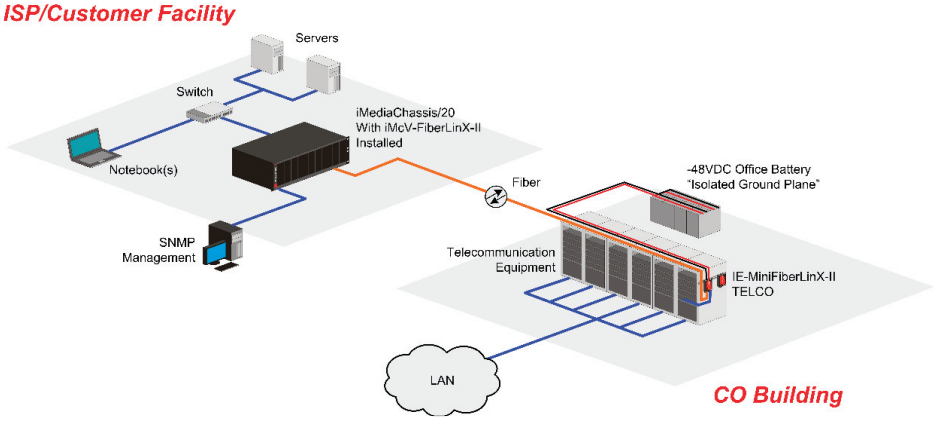
CWDM versions available, See website for details

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

IE-MiniFiberLinX-II/LastGasp

856-17720	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-MM850-ST, (-20°C to +70°C), 2 km
856-17721	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-MM850-SC, (-20°C to +70°C), 2 km
856-17722	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-MM1300-ST, 5 km
856-17723	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-MM1300-SC, 5 km
856-17724	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1310-ST, 10 km
856-17726	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1310/PLUS-ST, 30 km
856-17727	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1310/PLUS-SC, 30 km
856-17728	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1310/LONG-ST, 80 km
856-17729	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1310/LONG-SC, 80 km
856-17730	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1310/XLONG-SC, 100 km
856-17731	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1550/LONG-SC, 80 km
856-17732	IE-MiniFiberLinX-II/LastGasp, TP-TX/FX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-17740	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
856-17741	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
856-17742	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
856-17743	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
856-17744	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-17745	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-17746	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
856-17747	IE-MiniFiberLinX-II/LastGasp, TP-TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Application Example



Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | Q-in-Q | V-LAN Tagging | Industrial Ethernet | UMA 1 IP Address | PoE

MiniMc, MiniMc SFP and IE-PowerTray/18-AC

* SFPs Sold Separately

The smallest, most reliable and most cost effective switching and Gigabit-only media converters in the industry.

Product Overview

Media conversion is the most cost-effective solution for extending the productive life of legacy wiring plants and equipment while allowing implementation of new technologies. Media conversion's greatest benefits are flexibility and cost savings.

Measuring less than 3.5 inches deep and 2 inches wide, the MiniMc is the industry's smallest media converter with both data connections on the same side of the unit, and at a fraction of the cost of other alternatives. Plug-and-play operation with a variety of model types and powering options make the MiniMc series easy and convenient to use.

MiniMc SFP includes:

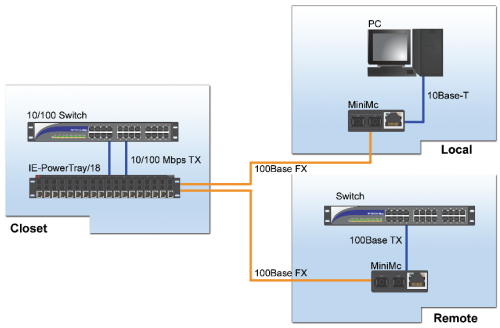
- One SFP fiber port
- One 10/100 Base-TX twisted pair port that auto-senses the connected device's rate and duplex mode (Half-Duplex/Full-Duplex)

MiniMc includes:

- One 100 Mbps FDX fiber port
- One 10/100 Base-TX twisted pair port that auto-senses the connected device's rate and duplex mode (Half-Duplex/Full-Duplex)

Application Example

Connect up to 18 MiniMcs in an IE-PowerTray/18-AC and network with up to 18 remote locations using 1.5 rack units of space.



Features

Perfect for a variety of applications

- Low Cost media converter
- Standalone converter includes country specific, high-reliability power adapter or use converter with USB-power cord (10/100 Mbps only)

Space saving alternative

- Standalone unit has small, rugged enclosure with compact, external power supply
- 18 connections in the 1.5U high IE-PowerTray/18-AC rackmountable enclosure
- Can be ordered without AC adapter for IE-PowerTray/18-AC installation

All versions include:

- Auto-Cross automatic selection between crossover or straight-through cable
- Status LEDs

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST, SC and SFP(only on MiniMc SFP version)

Regulatory Approvals:
FCC Class B, UL/cUL, CE, CSA

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.83"H x 1.80"W x 3.35"D (2.11 x 4.57 x 8.51 cm)

Power Rating:
AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz 5V DC output at 10W, 2.0A

Shipping Weight:
0.7 lbs (0.3 kg)

Physical Specifications IE-PowerTray/18-AC

Regulatory Approvals:
FCC Class A, UL/cUL, CE, CSA

Operating Temperature:
-4° to +158°F (-20° to +70°C)

Storage Temperature:
-40° to +185°F (-40° to +85°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
2.30"H x 16.97"W x 9.25"D (5.80 x 43.10 x 23.5 cm)

Power Rating:
AC input Load: 100-240VAC ±10%, 50/60Hz, 1.5 - 0.75A

Shipping Weight:
10 lbs (4.5 kg)

Ordering Information

* **MiniMc: TP-TX/SFP

855-10619	MiniMc, TP-TX/SFP (requires one IE-SFP/155 Module)

** MiniMc: TP-TX/FX and TP-TX/SX

855-10620	MiniMc, TP-TX/FX-MM850-ST, 2 km
855-10621	MiniMc, TP-TX/FX-MM850-SC, 2 km
855-10622	MiniMc, TP-TX/FX-MM1300-ST, 5 km
855-10623	MiniMc, TP-TX/FX-MM1300-SC, 5 km
855-10624	MiniMc, TP-TX/FX-SM1310/PLUS-ST, 40 km
855-10625	MiniMc, TP-TX/FX-SM1310/PLUS-SC, 40 km
855-10626	MiniMc, TP-TX/FX-SM1310/LONG-ST, 80 km
855-10627	MiniMc, TP-TX/FX-SM1310/LONG-SC, 80 km
855-10641	MiniMc, TP-TX/FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
855-10650	MiniMc, TP-TX/SSFX-MM1300-SC (1300xmt/1550rcv), 2 km
855-10651	MiniMc, TP-TX/SSFX-MM1550-SC (1550xmt/1300rcv), 2 km
855-10652	MiniMc, TP-TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
855-10653	MiniMc, TP-TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
855-10654	MiniMc, TP-TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-10655	MiniMc, TP-TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-10656	MiniMc, TP-TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
855-10657	MiniMc, TP-TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Available Accessories

806-39720	AC Power Adapter for MiniMc products (10 watt, -10°C to +50°C), (FranMar)
806-00720-00	Power Adapter Clip (USA), (FranMar)
806-00720-01	Power Adapter Clip (UK), (FranMar)
806-00720-02	Power Adapter Clip (Europe), (FranMar)
806-00720-03	Power Adapter Clip (Australia/New Zealand), (FranMar)
806-39753	IE-Power/5V, AC to DC (DIN Rail) Power Adapter (-20° to +70° C)
806-39628	36" USB Power Cable (for MiniMc only)
806-39629	12" USB Power Cable (for MiniMc only)
806-39638	Double-USB Power Cable 36"
806-39650	12" Barrel-Connector Power Cable
806-39105	DIN Rail Clip
895-39229	Wall Mount Bracket

IE-PowerTray/18-AC Chassis

850-13086	IE-PowerTray/18-AC (1.5U high, rackmountable enclosure)

CWDM versions available, See website for details

** Modular versions without AC adapter change the first Part Number to 854 (i.e. 855-10620 becomes 854-10620).

Auto Negotiation | Auto Cross | Industrial Ethernet

MiniMc-Gigabit, Giga-MiniMc, Giga-MiniMc SFP, Giga-MiniMc/LFPT

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

The smallest, most reliable and most cost effective switching and Gigabit-only media converters in the industry.

Product Overview

Media conversion is the most cost-effective solution for extending the productive life of legacy wiring plants and equipment while allowing implementation of new technologies. Media conversion's greatest benefits are flexibility and cost savings.

Measuring less than 3.5 inches deep and 2 inches wide, the MiniMc is the industry's smallest media converter with both data connections on the same side of the unit, and at a fraction of the cost of other alternatives. Plug-and-play operation with a variety of model types and powering options make the MiniMc series easy and convenient to use.

MiniMc-Gigabit includes:

- One 1000Base-SX or 1000Base-LX fiber port
- One 1000Base-T twisted pair port

Giga-MiniMc includes:

- One 1000Base-SX or 1000Base-LX fiber port
- One 10/100/1000 Mbps twisted pair port that auto-senses the connected device's speed and duplex mode (Half-Duplex/Full-Duplex)

Giga-MiniMc SFP includes:

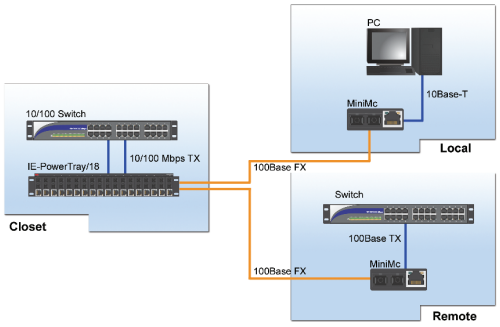
- One 1000Base-SFP Slot (SFP Sold Seperatly)
- One 10/100/1000 Mbps twisted pair port that auto-senses the connected device's speed and duplex mode (Half-Duplex/Full-Duplex)

Giga-MiniMc LFPT includes:

- One 1000Base-SX or 1000Base-LX fiber port
- One 10/100/1000 Mbps twisted pair port that auto-senses the connected device's speed and duplex mode (Half-Duplex/Full-Duplex)
- Link Fault Pass-Through (LFPT)

Application Example

Connect up to 18 MiniMcs in an IE-PowerTray/18-AC and network with up to 18 remote locations using 1.5 rack units of space.



Features

Perfect for a variety of applications

- Low Cost media converter
- Standalone converter includes country specific, high-reliability power adapter or use converter with USB-power cord (10/100 Mbps only)

Space saving alternative

- Standalone unit has small, rugged enclosure with compact, external power supply
- 18 connections in the 1.5U high IE-PowerTray/18-AC rackmountable enclosure
- Can be ordered without AC adapter for IE-PowerTray/18-AC installation

All versions include:

- Auto-Cross automatic selection between crossover or straight-through cable
- Status LEDs

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST, SC and SFP(only on MiniMc SFP version)

Regulatory Approvals:
FCC Class B, UL/cUL, CE, CSA
Giga-MiniMc FCC Class A

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.83"H x 1.80"W x 3.35"D (2.11 x 4.57 x 8.51 cm)

Power Rating:
AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz 5V DC output at 10W, 2.0A

Shipping Weight:
0.7 lbs (0.3 kg)

* **Giga-MiniMc/LFPT: TX/LX

856-11700	Giga-MiniMc/LFPT TX/SFP, (requires 1 IE-SFP/1250 module), Various

* ** Giga-MiniMc/LFPT: TX/SX

856-11701	Giga-MiniMc/LFPT TX/SX-MM850-SC, 220/550 m

Available Accessories

See Page 12

Use with Chassis Platform

IE-PowerTray/18-AC, See Page 12

CWDM versions available, See website for details

Ordering Information

** MiniMc-Gigabit: TX/SX and TX/LX

855-10730	MiniMc-Gigabit, TX/SX-MM850-SC, 220/550 m
855-10731	MiniMc-Gigabit, TX/LX-SM1310-SC, 10 km
855-10732	MiniMc-Gigabit, TX/LX-SM1310/PLUS-SC, 40 km
855-10733	MiniMc-Gigabit, TX/LX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
855-10734	MiniMc-Gigabit, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
855-10735	MiniMc-Gigabit, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
855-10742	MiniMc-Gigabit, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
855-10743	MiniMc-Gigabit, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
855-10736	MiniMc-Gigabit, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-10737	MiniMc-Gigabit, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-10744	MiniMc-Gigabit, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
855-10745	MiniMc-Gigabit, TX/SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
855-10738	MiniMc-Gigabit, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
855-10739	MiniMc-Gigabit, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km

* **Giga-MiniMc: TX/SX and TX/LX

856-10747	Giga-MiniMc, TX/SFP, (requires 1 IE-SFP/1250 module), Various
856-10730	Giga-MiniMc, TX/SX-MM850-SC, 220/550 m
856-10728	Giga-MiniMc, TX/LX-MM1300-SC, 2 km
856-10731	Giga-MiniMc, TX/LX-SM1310-SC, 10 km
856-10732	Giga-MiniMc, TX/LX-SM1310/PLUS-SC, 40 km
856-10733	Giga-MiniMc, TX/LX-SM1550/LONG-SC, 80 km
856-10729	Giga-MiniMc, TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-10734	Giga-MiniMc, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
856-10735	Giga-MiniMc, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
856-10742	Giga-MiniMc, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
856-10743	Giga-MiniMc, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
856-10736	Giga-MiniMc, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-10737	Giga-MiniMc, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-10744	Giga-MiniMc, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
856-10745	Giga-MiniMc, TX/SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
856-10738	Giga-MiniMc, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
856-10739	Giga-MiniMc, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km

** Giga-MiniMc Modular versions without AC adapter change the first Part Number to 854 (i.e., 856-10747 becomes 854-10747).

Auto Negotiation

Auto Cross

IE-MiniMc & IE-Giga-MiniMc

6-YEAR Comprehensive Warranty

The fast-growing MiniMc series includes an Industrial Ethernet model, allowing operation in extreme temperatures, with additional power and mounting options.

Product Overview

Equipped with all the features of the original — copper-to-fiber conversion, plug-and-play operation, miniature size and multiple power options — the IE-MiniMc also supports the IEEE 802.3af Power Over Ethernet (PoE) standard to function as a powered device.

All versions include:

- Extended operating temperature of -25 to +85° C
- Auto-Cross automatic selection between crossover or straight-through cable
- Status LEDs

IE-MiniMc includes:

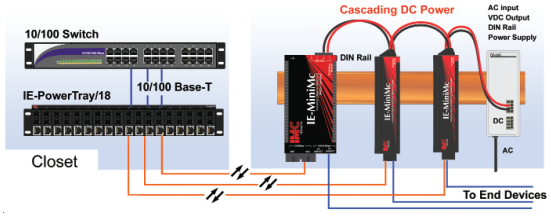
- One 100 Mbps Full-Duplex fiber port
- One 10/100 Base-TX twisted-pair port that auto-senses the connected device's rate and duplex mode (Half-Duplex/Full-Duplex)
- Twisted pair port also functions as a Powered Device port, supporting Power Over Ethernet (PoE)

IE-Giga-MiniMc includes:

- One 1000Base-SX or 1000Base-LX fiber port
- One 10/100/1000 Mbps twisted-pair port that auto-senses the connected device's speed and duplex mode (Half-Duplex/Full-Duplex)

Application Examples

DIN Rail clips are optional with the IE MiniMc, allowing installation on a DIN rail. When installing multiple IE-MiniMc units on a DIN rail, one DC input source can cascade from one DC block to the next, until reaching the maximum electrical current available.



Auto Negotiation | Auto Cross | Industrial Ethernet

Features

Most cost-effective fiber converter available today

- Low cost, high flexibility — connects 10/100 Mbps copper to 100 Mbps fiber
- Install for use in extreme temperatures

Multiple powering options for a variety of applications

- Includes 4-terminal DC power block
- Includes country-specific, AC power adapter (0° to +50°C)
- IE-MiniMc supports IEEE 802.3af Power over Ethernet standard; draws power from power sourcing equipment (10/100 version only)
- Powering options can be combined for AC/DC redundancy

Space saving alternative

- Standalone unit has small, rugged enclosure with compact, external power supply
- 18 connections in the 1.5U high IE-PowerTray/18-AC rackmountable enclosure
- Can be ordered without AC adapter for IE-PowerTray/18-AC installation
- Mounts on DIN rail

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class A (using DC terminal power or Power Over Ethernet (PoE)), Class B (using any DC jack optional), UL/cUL, CE, CSA, CB

Operating Temperature:
-13° to +185°F (-25° to +85°C) Without AC Adapter
+14° to +122°F (-10° to +50°C) With AC Adapter

Storage Temperature:
-31° to +167°F (-35° to +75°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.83"H x 1.80"W x 3.35"D (2.11 x 4.57 x 8.51 cm)

Power Rating:
AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz
5V DC output at 10W, 2.0A
7-50V DC, 1A-0.1A

Shipping Weight:
0.7 lbs (0.3 kg)

Available Accessories

See Page 12

Use with Chassis Platform

IE-PowerTray/18-AC, See Page 12

Ordering Information

IE-MiniMc: TP-TX/FX

855-19720	IE-MiniMc, TP-TX/FX-MM850-ST, 2 km
855-19721	IE-MiniMc, TP-TX/FX-MM850-SC, 2 km
855-19722	IE-MiniMc, TP-TX/FX-MM1300-ST, 5 km
855-19723	IE-MiniMc, TP-TX/FX-MM1300-SC, 5 km
855-19724	IE-MiniMc, TP-TX/FX-SM1310/PLUS-ST, 30 km
855-19725	IE-MiniMc, TP-TX/FX-SM1310/PLUS-SC, 30 km
855-19726	IE-MiniMc, TP-TX/FX-SM1310/LONG-ST, 80 km
855-19727	IE-MiniMc, TP-TX/FX-SM1310/LONG-SC, 80 km
855-19730	IE-MiniMc, TP-TX/FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
855-19750	IE-MiniMc, TP-TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
855-19751	IE-MiniMc, TP-TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
855-19752	IE-MiniMc, TP-TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
855-19753	IE-MiniMc, TP-TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
855-19754	IE-MiniMc, TP-TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-19755	IE-MiniMc, TP-TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-19756	IE-MiniMc, TP-TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
855-19757	IE-MiniMc, TP-TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

IE-Giga-MiniMc: TX/SX and TX/LX

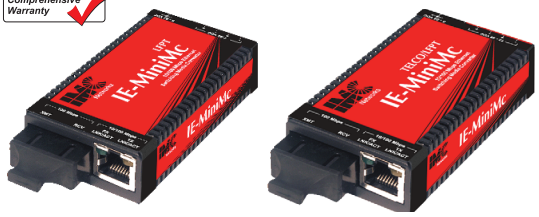
856-18830	IE-Giga-MiniMc, TX/SX-MM850-SC, 220/550 m
856-18831	IE-Giga-MiniMc, TX/LX-SM1310-SC, 15 km
856-18832	IE-Giga-MiniMc, TX/LX-SM1310/PLUS-SC, 40 km
856-18833	IE-Giga-MiniMc, TX/LX-SM1550/LONG-SC, 80 km
856-18834	IE-Giga-MiniMc, TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-18835	IE-Giga-MiniMc, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
856-18836	IE-Giga-MiniMc, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
856-18825	IE-Giga-MiniMc, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
856-18826	IE-Giga-MiniMc, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
856-18837	IE-Giga-MiniMc, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-18838	IE-Giga-MiniMc, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-18827	IE-Giga-MiniMc, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
856-18828	IE-Giga-MiniMc, TX/SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
856-18839	IE-Giga-MiniMc, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
856-18840	IE-Giga-MiniMc, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km
856-18841	IE-Giga-MiniMc, TX/SSLX-SM1490/XLONG-SC (1490xmt/1550rcv), 80 km
856-18842	IE-Giga-MiniMc, TX/SSLX-SM1550/XLONG-SC (1550xmt/1490rcv), 80 km

* Modular versions without AC adapter change the first Part Number to 854 (i.e. 855-10620 becomes 854-10620).

CWDM versions available, See website for details

IE-MiniMc/Telco & IE-MiniMc/Telco-LFPT

6-YEAR Comprehensive Warranty



The IE-MiniMc Series are Industrial Equipment (IE) versions of the popular MiniMc Series, offering a wide range of transmission speeds, extended temperature, and multiple powering and mounting options.

Product Overview

Equipped with all the features of the original — copper-to-fiber conversion, plug-and-play operation, miniature size and multiple power options — the IE-MiniMc/Telco and IE-MiniMc/Telco LFPT also support the IEEE 802.3af Power Over Ethernet (PoE) standard to function as a powered device.

All versions include:

- Extended operating temperature of -25 to +85° C
- Auto-Cross automatic selection between crossover or straight-through cable
- Status LEDs

IE-MiniMc/Telco includes:

- One 100 Mbps Full-Duplex fiber port
- One 10/100 Base-TX twisted-pair port that auto-senses the connected device's rate and duplex mode (Half-Duplex/Full-Duplex)
- Twisted pair port also functions as a Powered Device port, supporting Power Over Ethernet (PoE)

IE-MiniMc/Telco-LFPT includes:

- One 1000Base-SX or 1000Base-LX fiber port
- One 10/100/1000 Mbps twisted-pair port that auto-senses the connected device's speed and duplex mode (Half-Duplex/Full-Duplex)
- Link Fault Pass-Through(LFPT)

Features

The most cost-effective fiber converter available

- Low cost and feature rich
- Value add industrial grade extended temperature performance

Versatile Solution

- Stand-alone unit with small, rugged metal enclosure with compact, external power supply
- Also available in Gigabit Switching models (IE-Giga-MiniMc)[1]
- -48 VDC terminal for Telco applications[2]
- Available for a variety of fiber types and connectors, including single-strand fiber

More power options than other converters, for a variety of applications

- Includes country-specific AC power adapter
- Terminal DC power block (non-Telco) with extended voltage range (7 to 50 VDC)
- Installs in the IE-PowerTray/18-AC
- IEEE 802.3af Power Over Ethernet
- Powering options can be combined for AC/DC redundancy
- USB power

Plug-and-Play Operation

- User-friendly Auto Negotiation
- Auto-Cross feature for twisted pair connection on all converters

"Industrial Equipment" (IE) features for operation in difficult environments

- Extended temperature functionality, up to -25° to +85° C
- DIN Rail mountable (DIN clips sold separately)

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:

RJ-45, ST and SC

Regulatory Approvals:

FCC Class A (using DC terminal power or Power Over Ethernet (PoE)), Class B (using any DC jack optional), UL/cUL, CE, CSA, CB

Operating Temperature:

-40° to +185°F (-40° to +85°C) Without AC Adapter

+14° to +122°F (-10° to +50°C) With AC Adapter

Storage Temperature:

-31° to +167°F (-35° to +75°C)

Humidity:

5 to 95% (non-condensing)

Altitude:

0 to 10,000 ft.

Dimensions

0.83"H x 1.80"W x 3.35"D (2.11 x 4.57 x 8.51 cm)

Power Rating:

AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz 5V DC output at 10W, 2.0A

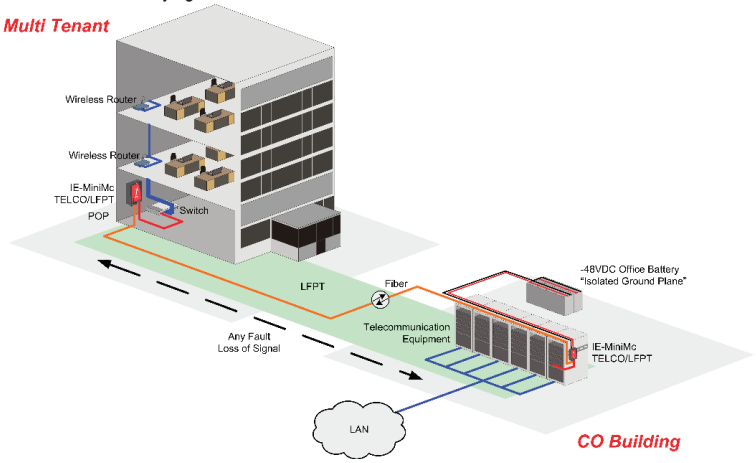
7-50V DC, 1A-0.1A

Shipping Weight:

0.7 lbs (0.3 kg)

Application Examples

Here we see one IE-MiniMc TELCO/LFPT installed at a Telco (powered by a -48 VDC office battery) and one installed at an MTU. The LFPT function assists in identifying a break in the network if one were to occur.



Ordering Information

IE-MiniMc/LFPT: TP-TX/FX

855-19822	IE-MiniMc/LFPT, TP-TX/FX-MM850-SC, 2 km
855-19824	IE-MiniMc/LFPT, TP-TX/FX-MM1300-SC, 5 km
855-19830	IE-MiniMc/LFPT, TP-TX/FX-SM1310/PLUS-SC, 30 km
855-19832	IE-MiniMc/LFPT, TP-TX/FX-SM1310/LONG-SC, 80 km
855-19833	IE-MiniMc/LFPT, TP-TX/FX-SM1550/LONG-SC, 80 km

IE-MiniMc/Telco-LFPT: TP-TX/FX

855-19202	IE-MiniMc/Telco-LFPT, TX/FX-MM850-SC, 2 km
855-19204	IE-MiniMc/Telco-LFPT, TX/FX-MM1300-SC, 5 km
855-19210	IE-MiniMc/Telco-LFPT, TX/FX-SM1310/PLUS-SC, 30 km
855-19212	IE-MiniMc/Telco-LFPT, TX/FX-SM1310/LONG-SC, 80 km
855-19213	IE-MiniMc/Telco-LFPT, TX/FX-SM1550/LONG-SC, 80 km

Available Accessories

See Page 12

Use with Chassis Platform

IE-PowerTray/18-AC, See Page 12

* Modular versions without AC adapter change the first Part Number to 854 (i.e. 855-10620 becomes 854-10620).

Auto Negotiation | Auto Cross | Industrial Ethernet

PoE and PoE+ Giga-MiniMc

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

The PoE and PoE+ Giga-MiniMc is targeted for Gigabit and 100 Mbps applications that require power over Ethernet to locations where PoE is needed to power the unit.

Product Overview

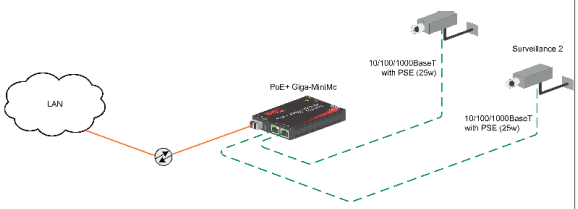
The PoE and PoE+Giga-MiniMc are low-cost, compact, multi-port media converters that support both PoE and PoE+ standards. Utilizing their flexibility and compact size, interior private network applications can further benefit from the ever-expanding versatility of the MiniMc product line.

Featuring 2 10/100/1000Base-T copper UTP ports and one SFP uplink port that supports either a copper or fiber SFP, the PoE and PoE+ Giga-MiniMc are Power Source Equipment (PSE) devices. The PoE+ GigaMiniMc is capable of powering up to two Powered Devices (PD) over standard CAT5 cable or better, whereas the PoE GigaMiniMc can power one PD device via a copper port while delivering data over the other copper port. The PoE+ GigaMiniMc is able to power high-power devices such as touch panels, PTZ (pan-tilt-zoom) IP surveillance cameras, and RFID readers that require more power than the typical 15.4 W provided by standard PSE devices such as the PoE GigaMiniMc.

The PoE and PoE+ Giga-MiniMc models are fully compatible with the IEEE 802.3af/at standards to ensure a seamless integration into your network. Enhanced features include store-and-forward, Autocross and PoE reset on fiber loss of signal. PoE reset is an advanced function that, when enabled, will force the PSE output power to reset when LINK state is lost on the SFP port.

Application Examples

In the following example, the PoE+ Giga-MiniMc is shown powering two separate pan/tilt/zoom (PTZ) IP surveillance cameras at a remote location. The PoE+ Giga-MiniMc is powered via AC or 48 VDC, while it can be mounted up to 100 m from the cameras that are being driven via PoE.



Features

Flexible Solution

- Connects 10/100/1000 Mbps copper to 100/1000 Mbps fiber SFP or 10/100/1000 Mbps copper SFP
- Supports Jumbo Frames (up to 10240 bytes)
- Rugged stand-alone metal enclosure with compact external power supply
- Multiple mounting options (Desktop, DIN Rail or Wall-mount)
- For multimode, single-mode,single-strand and CWDM fiber
- Features configurable PoE Reset on Fiber LOS
- Packet prioritization

Power Options:

- Supports IEEE 802.3af PoE (15.4W) and IEEE 802.3at PoE+ (25.5W) standards
- 4-terminal DC power with a pair of input terminals and a pair of output terminals for cascading power on DIN installation
- External AC power supply

SFP Support

- Auto negotiate speed and flow control for 10/100/1000 copper SFPs with SGMII
- Supports fixed speed 1 Gbps full-duplex copper SFPs
- Auto detect for 100 or 1000 Mbps optical SFPs

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:

RJ-45, ST, SC and SFP

Regulatory Approvals:

FCC Class A, UL/cUL, CE, CSA

Operating Temperature:

+32° F to +158° F (0° C to +70° C) DC terminal Block

+32° F to +122° F (0° C to +50° C) w/ AC Adapter

Storage Temperature:

-40° to +185° F (-40° to +85° C)

Humidity:

5 to 95% (non-condensing)

Altitude:

0 to 10,000 ft.

Dimensions

0.80" H x 3.645" W x 3.82" D

(2.032 cm x 9.258 cm x 9.7028 cm)

Power Rating:

AC Wall adapter:

PoE+ Giga-MiniMc

Input: 100 to 240 ±10% VAC, 50/60H, 2A *, Output: 48 VDC, 0.62A

PoE Giga-MiniMc

Input: 100 to 240 ±10% VAC, 50/60H, 0.7A *, Output: 48 VDC, 0.62A

DC Input Voltage:

PoE+ Giga-MiniMc

51 to 57 VDC on DC terminal block, 51 to 57 VDC on DC jack

PoE Giga-MiniMc

45 to 57 VDC on DC terminal block, 48 VDC on DC jack

Shipping Weight:

0.7 lbs (0.3 kg)

Ordering Information

* PoE Giga-MiniMc

857-10811	PoE Giga-MiniMc, 2TX/SFP, Various
857-10812	PoE Giga-MiniMc, 2TX/SX-MM850-SC, 220/550 m
857-10813	PoE Giga-MiniMc, 2TX/LX-MM1300-SC, 2 km
857-10814	PoE Giga-MiniMc, 2TX/LX-SM1310-SC, 15 km
857-10815	PoE Giga-MiniMc, 2TX/LX-SM1310/PLUS-SC, 40 km
857-10816	PoE Giga-MiniMc, 2TX/LX-SM1550/LONG-SC, 80 km
857-10817	PoE Giga-MiniMc, 2TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
857-10820	PoE Giga-MiniMc, 2TX/SSLX-SM1310-SC (1310xmt/1550 rcv), 10 km
857-10821	PoE Giga-MiniMc, 2TX/SSLX-SM1550-SC (1550xmt/1310 rcv), 10 km
857-10822	PoE Giga-MiniMc, 2TX/SSBX-SM1310-SC (1310xmt/1490 rcv), 20 km
857-10823	PoE Giga-MiniMc, 2TX/SSBX-SM1490-SC (1490xmt/1310 rcv), 20 km
857-10824	PoE Giga-MiniMc, 2TX/SSLX-SM1310/PLUS-SC (1310xmt/1550 rcv), 40 km
857-10825	PoE Giga-MiniMc, 2TX/SSLX-SM1550/PLUS-SC (1550xmt/1310 rcv), 40 km
857-10826	PoE Giga-MiniMc, 2TX/SSBX-SM1310/PLUS-SC (1310xmt/1490 rcv), 30 km
857-10827	PoE Giga-MiniMc, 2TX/SSBX-SM1490/PLUS-SC (1490xmt/1310 rcv), 30 km
857-10828	PoE Giga-MiniMc, 2TX/SSLX-SM1490/LONG-SC (1490xmt/1550 rcv), 70 km
857-10829	PoE Giga-MiniMc, 2TX/SSLX-SM1550/LONG-SC (1550xmt/1490 rcv), 70 km

* PoE+ Giga-MiniMc

857-10911	PoE Giga-MiniMc, 2TX/SFP, Various
857-10912	PoE Giga-MiniMc, 2TX/SX-MM850-SC, 220/550 m
857-10913	PoE Giga-MiniMc, 2TX/LX-MM1300-SC, 2 km
857-10914	PoE Giga-MiniMc, 2TX/LX-SM1310-SC, 15 km
857-10915	PoE Giga-MiniMc, 2TX/LX-SM1310/PLUS-SC, 40 km
857-10916	PoE Giga-MiniMc, 2TX/LX-SM1550/LONG-SC, 80 km
857-10917	PoE Giga-MiniMc, 2TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
857-10920	PoE+ Giga-MiniMc, 2TX/SSLX-SM1310-SC (1310xmt/1550 rcv), 10 km
857-10921	PoE+ Giga-MiniMc, 2TX/SSLX-SM1550-SC (1550xmt/1310 rcv), 10 km
857-10922	PoE+ Giga-MiniMc, 2TX/SSBX-SM1310-SC (1310xmt/1490 rcv), 20 km
857-10923	PoE+ Giga-MiniMc, 2TX/SSBX-SM1490-SC (1490xmt/1310 rcv), 20 km
857-10924	PoE+ Giga-MiniMc, 2TX/SSLX-SM1310/PLUS-SC (1310xmt/1550 rcv), 40 km
857-10925	PoE+ Giga-MiniMc, 2TX/SSLX-SM1550/PLUS-SC (1550xmt/1310 rcv), 40 km
857-10926	PoE+ Giga-MiniMc, 2TX/SSBX-SM1310/PLUS-SC (1310xmt/1490 rcv), 30 km
857-10927	PoE+ Giga-MiniMc, 2TX/SSBX-SM1490/PLUS-SC (1490xmt/1310 rcv), 30 km
857-10928	PoE+ Giga-MiniMc, 2TX/SSLX-SM1490/LONG-SC (1490xmt/1550 rcv), 70 km
857-10929	PoE+ Giga-MiniMc, 2TX/SSLX-SM1550/LONG-SC (1550xmt/1490 rcv), 70 km

Available Accessories

806-00720-00	Power Adapter Clip (USA), (FranMar)
806-00720-01	Power Adapter Clip (UK), (FranMar)
806-00720-02	Power Adapter Clip (Europe), (FranMar)
806-00720-03	Power Adapter Clip (Australia/New Zealand), (FranMar)
806-39105	DIN Rail Clip
806-39800	PoE Power Adapter for PoE Giga-MiniMc
806-39900	PoE+ Power Adapter for PoE+ Giga-MiniMc
806-39910	PoE+ Isolated Power Adapter

Auto Negotiation | Auto Cross | PoE

PD-Switch

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

The PD-Switch combines flexible copper and fiber interface options with port and packet-based traffic prioritization while extending network range by utilizing Power over Ethernet (PoE) technology.

Product Overview

The (PoE) PD-Switch is a full-featured, 5-port MAC layer 10/100Base-T switch that extends the range of Ethernet networks, and increases port density, while being powered via IEEE 802.3af compliant PoE through its "PD-port" (eliminating the need to run a separate power line for the device). Ethernet cabling typically runs only 100 meters; the PD-Switch, extends the outer range of an ethernet network by an additional 100 meters.

With multiple port configurations, the PD-Switch provides a variety of port options while increasing port density. PD-Switches come equipped with one "PD" RJ-45 port and either:

- Four 10/100Base-T RJ-45 data ports
- Three 10/100Base-T RJ-45 data ports and one SFP data port (rate depends on SFP)
- Two 10/100Base-T RJ-45 data ports and one 100Base-FX fiber data port

Features

Multi-port switch powered by the IEEE 802.3af Power Over Ethernet Standard

- PD accepts power from any network device providing PoE
- Multiple ports increase network port density

Meets a multitude of installation requirements

- SFP and fiber port configurations (optional) for different network environments
- All RJ-45 ports feature Auto-Cross and Auto Negotiation
- Port for High Priority traffic
- Available with ST or SC fiber connectors
- Optional single-strand fiber model

Full-Featured Switch

- Broadcast Storm Protection helps control excessive broadcast traffic
- DiffServ on all ports provides Quality of Service prioritization
- Far End Fault provides notification of Link Loss on all fiber ports
- Supports 1916 byte Packet Size

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber and SFP

Connectors:
RJ-45, ST, SC and SFP

Regulatory Approvals:
FCC Class B, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

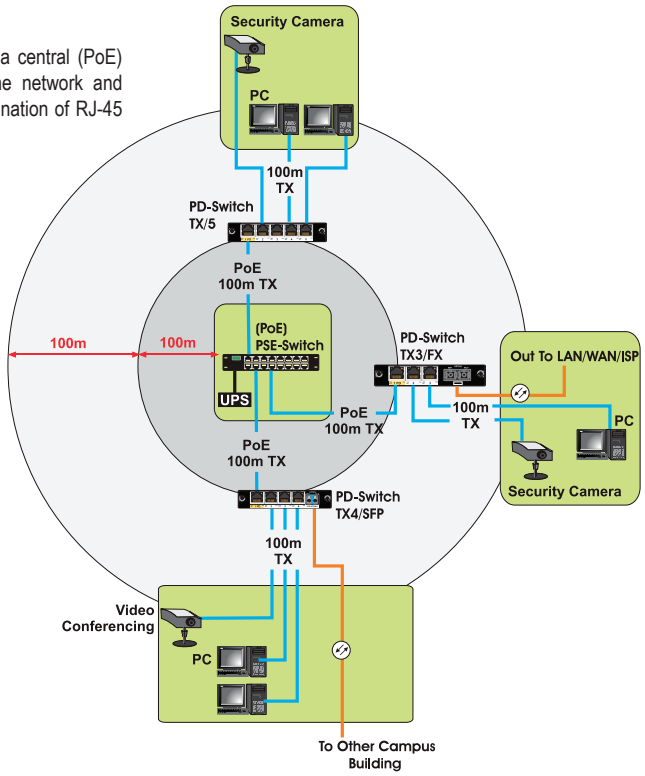
Dimensions
1.55"H x 4.75"L x 7.31"D (3.94 x 12.07 x 18.57 cm)

Power Rating:
36V DC-50V DC, 56mA-40mA

Shipping Weight:
1.8 lbs (0.82 kg)

Application Example

The PD-Switch has been connected to a central (PoE) PSE-Switch, extending the range of the network and increasing port density by using a combination of RJ-45 ports and fiber ports.



Ordering Information

* PD-Switch

852-16440	PD-Switch, TX/5, 100 m
852-16441	PD-Switch, TX/4 + SFP, Various
852-16442	PD-Switch, TX/3 + FX-MM850-ST, 2 km
852-16443	PD-Switch, TX/3 + FX-MM850-SC, 2 km
852-16444	PD-Switch, TX/3 + FX-MM1300-ST, 5 km
852-16445	PD-Switch, TX/3 + FX-MM1300-SC, 5 km
852-16446	PD-Switch, TX/3 + FX-SM1310/PLUS-ST, 40 km
852-16447	PD-Switch, TX/3 + FX-SM1310/PLUS-SC, 40 km
852-16448	PD-Switch, TX/3 + FX-SM1310/LONG-ST, 80 km
852-16449	PD-Switch, TX/3 + FX-SM1310/LONG-SC, 80 km
852-16450	PD-Switch, TX/3 + FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
852-16470	PD-Switch, TX/3 + SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
852-16471	PD-Switch, TX/3 + SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
852-16472	PD-Switch, TX/3 + SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
852-16473	PD-Switch, TX/3 + SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
852-16474	PD-Switch, TX/3 + SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
852-16475	PD-Switch, TX/3 + SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Auto Negotiation | Auto Cross | PoE

McBasic Series

6-YEAR Comprehensive Warranty

With its small yet rugged design, internal AC power supply and troubleshooting features, the McBasic is the best standalone media converter in the industry.

Product Overview

When simple, individual, copper-to-fiber conversions are required, along with advanced troubleshooting features, installing McBasic Series standalone media converters is the perfect, cost-effective solution. The McBasic's small, table-top design and durability make it perfect for installation anywhere space is limited.

The McBasic helps make isolating fiber breaks easier with such features as LinkLoss, FiberAlert, Transparency and Link Fault Detection. The McBasic also features either AutoCross or switch-selectable crossover/pass-through on twisted pair connections ports. The McBasic-Gigabit offers all the benefits of the McBasic in addition to Link Fault Pass-Through, but with gigabit speeds.

McBasic 10 Mbps Converters:

- Convert 10 Mbps twisted pair to 10 Mbps fiber.

McBasic 100 Mbps Converters:

- Convert 100 Mbps twisted pair to 100 Mbps fiber.

McBasic 10/100, Auto Sensing Dual-Speed Converters:

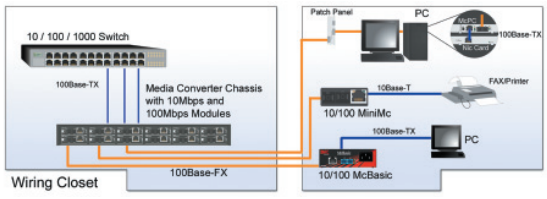
- Convert 10 Mbps twisted pair to 10 Mbps fiber OR convert 100 Mbps twisted pair to 100 Mbps fiber.

McBasic-Gigabit 1000 Mbps Converters:

- Convert 1000 Mbps twisted pair to 1000 Mbps fiber.

Application Example

The diagram illustrates the wide variety of media converters available from B&B Electronics including the 10/100 McBasic.



Auto Negotiation | Auto Cross | Fiber Alert | Link Loss | LFPT

Features

Perfect for a variety of applications

- Small, rugged design offers many advanced features

Meets a multitude of installation requirements

- McBasic: available in 10 Mbps, 100 Mbps and auto-sensing 10/100 Mbps versions
- McBasic-Gigabit: available in 1000 Mbps version

Converts 10 Mbps twisted pair to fiber today, and 100 Mbps twisted pair to fiber tomorrow

- McBasic 10/100 provides transparent end-to-end 10/100 Auto Negotiation for easy upgrade; no user intervention or visits to remote locations required
- McBasic Gigabit also features LFTP

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST, SC (McBasic-Gigabit has SC fiber only)

Regulatory Approvals McBasic:
McBasic: FCC Class B, CE, UL/cUL, CSA
McBasic-Gigabit: FCC Class A, CE, UL/cUL, CSA

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
0° to +160°F (-20° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
1.64"H x 4.75"W x 4.95"D (4.2 x 12.1 x 12.6 cm)
McBasic Gigabit Dimensions:
1.64"H x 4.75"W x 7.3"D (4.2 x 12.1 x 18.6 cm)

Power Rating:
100-240V AC, 50/60Hz, 1.0A

Shipping Weight:
1.7 lbs (0.77 kg) McBasic Gigabit Only
1.3 lbs (0.58 kg) All others

Ordering Information

McBasic TP/FO

855-10230	McBasic, TP/FO-MM850-ST, 2 km
855-10231	McBasic, TP/FO-MM850-SC, 2 km
855-10232	McBasic, TP/FO-MM1300-ST, 2 km
855-10233	McBasic, TP/FO-MM1300-SC, 2 km
855-10234	McBasic, TP/FO-SM1310/PLUS-ST, 40 km
855-10235	McBasic, TP/FO-SM1310/PLUS-SC, 40 km
855-10237	McBasic, TP/FO-SM1310/LONG-ST, 80 km
855-10238	McBasic, TP/FO-SM1310/LONG-SC, 80 km
855-10240	McBasic, TP/FO-SM1550/LONG-SC, 80 km

McBasic TX/SX and TX/FX

855-10929	McBasic, TX/SX-MM850-ST, 2 km
855-10930	McBasic, TX/SX-MM850-SC, 2 km
855-10927	McBasic, TX/FX-MM1300-ST, 5 km
855-10928	McBasic, TX/FX-MM1300-SC, 5 km
855-10931	McBasic, TX/FX-SM1310/PLUS-ST, 40 km
855-10932	McBasic, TX/FX-SM1310/PLUS-SC, 40 km
855-10933	McBasic, TX/FX-SM1310/LONG-ST, 80 km
855-10934	McBasic, TX/FX-SM1310/LONG-SC, 80 km
855-10937	McBasic, TX/FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
855-10949	McBasic, TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
855-10950	McBasic, TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
855-10951	McBasic, TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
855-10952	McBasic, TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
855-10953	McBasic, TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-10954	McBasic, TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-10955	McBasic, TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
855-10957	McBasic, TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

McBasic 10/100 TX/SX and TX/FX

855-10260	McBasic, TX/SX 10/100-MM850-ST, 2 km
855-10261	McBasic, TX/SX10/100-MM850-SC, 2 km
855-10262	McBasic, TX/FX 10/100-MM1300-ST, 5 km
855-10263	McBasic, TX/FX 10/100-MM1300-SC, 5 km
855-10267	McBasic, TX/FX 10/100-SM1310/PLUS-ST, 40 km
855-10268	McBasic, TX/FX 10/100-SM1310/PLUS-SC, 40 km
855-10269	McBasic, TX/FX 10/100-SM1310/LONG-ST, 80 km
855-10270	McBasic, TX/FX 10/100-SM1310/LONG-SC, 80 km
855-10274	McBasic, TX/FX 10/100-SM1550/LONG-SC, 80 km

McBasic-Gigabit Ethernet (LFPT)

855-11913	McBasic-Gigabit, TX/SX-MM850-SC, 220/550 m
855-11914	McBasic-Gigabit, TX/LX-SM1310-SC, 15 km
855-11915	McBasic-Gigabit, TX/LX-SM1310/PLUS-SC, 40 km
855-11917	McBasic-Gigabit, TX/LX-SM1550/LONG-SC, 80 km
855-11918	McBasic-Gigabit, TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
855-11844	McBasic-Gigabit, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
855-11845	McBasic-Gigabit, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
855-11824	McBasic-Gigabit, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
855-11825	McBasic-Gigabit, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
855-11846	McBasic-Gigabit, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-11847	McBasic-Gigabit, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-11826	McBasic-Gigabit, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
855-11827	McBasic-Gigabit, TX/SSBX-SM1450/PLUS-SC (1490xmt/1310rcv), 30 km
855-11850	McBasic-Gigabit, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
855-11851	McBasic-Gigabit, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km
855-11852	McBasic-Gigabit, TX/SSLX-SM1490/XLONG-SC (1490xmt/1550rcv), 80 km
855-11853	McBasic-Gigabit, TX/SSLX-SM1550/XLONG-SC (1550xmt/1490rcv), 80 km

Accessories See page 46

PSE-McBasic

6-YEAR Comprehensive Warranty

Supporting the IEEE 802.3af PoE standard, the standalone PSE-McBasic media converter offers unparalleled installation flexibility and cost-savings.

Product Overview

Equipped with all the features that have made the McBasic series one of B&B Electronics' most popular brands — copper-to-fiber conversion, troubleshooting capability, a small yet rugged design, and an internal AC power supply — the PSE-McBasic uses the IEEE 802.3af Power over Ethernet (PoE) standard to create the ideal solution for installing devices such as IP security cameras and Wi-Fi access points at remote locations miles away from the central office. The PSE-McBasic series performs media conversion while providing power to the end-device at the remote site.

Power Over Ethernet technology allows the PSE-McBasic to be the Power Source Equipment (PSE) by distributing an electrical current across existing twisted pair data cabling. LEDs indicate the amount of power being supplied to the "Powered Device" (PD) as well as if the PSE-McBasic is over temperature or over current or has an open circuit.

Features

- 100Base-TX twisted pair
- 100Base-FX or SX fiber
- IEEE 802.3af compliant
- Includes fixed, internal AC power
- Switch for manual configuration
- Small, rugged design
- Supports Half and Full-Duplex operation
- Includes diagnostic LEDs

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, CE, UL/cUL, CSA

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
1.45"H x 4.73"W x 7.30"D (3.68 x 12.01 x 18.54 cm)

Power Rating:
100-240V AC, 50/60Hz, 1A

Shipping Weight:
1.8 lbs (0.82 kg)

Ordering Information

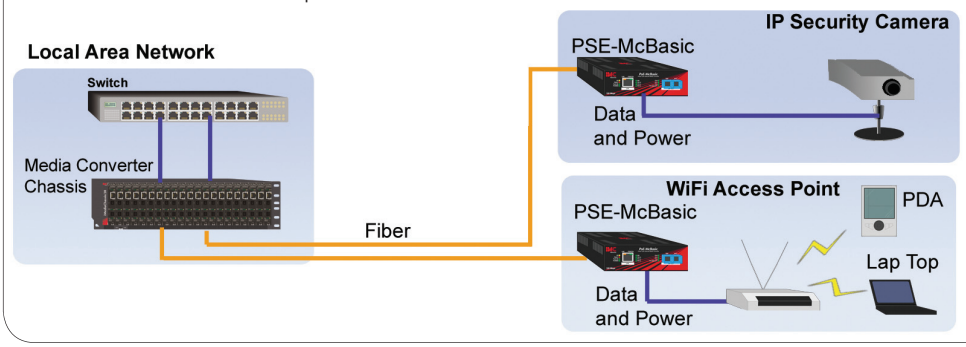
PSE-McBasic: TX/SX and TX/FX

855-16929	PSE-McBasic, TX/SX-MM850-ST, 2 km
855-16930	PSE-McBasic, TX/SX-MM850-SC, 2 km
855-16927	PSE-McBasic, TX/FX-MM1300-ST, 5 km
855-16928	PSE-McBasic, TX/FX-MM1300-SC, 5 km
855-16931	PSE-McBasic, TX/FX-SM1310/PLUS-ST, 40 km
855-16932	PSE-McBasic, TX/FX-SM1310/PLUS-SC, 40 km
855-16933	PSE-McBasic, TX/FX-SM1310/LONG-ST, 80 km
855-16934	PSE-McBasic, TX/FX-SM1310/LONG-SC, 80 km
855-16935	PSE-McBasic, TX/FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
855-16951	PSE-McBasic, TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
855-16952	PSE-McBasic, TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
855-16953	PSE-McBasic, TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-16954	PSE-McBasic, TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-16955	PSE-McBasic, TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
855-16957	PSE-McBasic, TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Accessories See page 46

Application Example

By combining media conversion and PoE sourcing capabilities, PSE-McBasic can easily power remote network devices such as IP cameras and WiFi access points.



Auto Negotiation | Auto Cross | Fiber Alert | Link Loss | PoE

AccessConverter

6-YEAR Comprehensive Warranty

Terminate fiber and connect multiple Ethernet devices — PCs, webcams, printers — at a remote location with the AccessConverter.

Product Overview

The AccessConverter is a multi-port media converter, aggregating three 10/100 Ethernet twisted pair ports into a single 100Base-FX uplink. While typical media converters perform a conversion between one twisted pair interface and one fiber optic interface, the AccessConverter has three 10/100 ports to significantly increase the application flexibility while reducing the cost per conversion.

The AccessConverter is an ideal solution for LAN workgroups and Fiber-to-the-Premises applications, connecting and aggregating multiple devices — such as PCs, servers, printers, and VoIP phones — into a fiber optic cabling infrastructure. Providing plug-and-play operation, the AccessConverter/3 features 10/100 Auto Negotiation and AutoCross on the twisted pair ports. The 100Base-FX uplink port supports ST and SC connectors for multi-mode, single-mode and single-strand fiber types, providing fiber connectivity from 2 km up to 80 km distances. Every unit ships with a country-specific power cord.

Features

Most cost-effective fiber converter available today

- Low cost, high flexibility— same small unit performs media conversion and switching functions
- Offers three downlink connections

Perfect for a variety of applications

- Device includes high-reliability power adapter with country-specific clip
- Uplink available on rear or front of unit
- Compact size allows for flexible installation configurations

Space saving alternative

- Device has small, rugged enclosure with compact external power supply
- Table-top or wall-mount installation

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, CE, UL/cUL, CSA

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +18°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
0.92"H x 3.50"W x 4.38"D (2.34 x 8.89 x 11.13 cm)

Power Rating:
AC Wall adapter: 100/240 ±10% VAC input, 50/60 Hz 5V DC output at 10W, 2.0A

Shipping Weight:
1.1 lbs (0.50 kg)

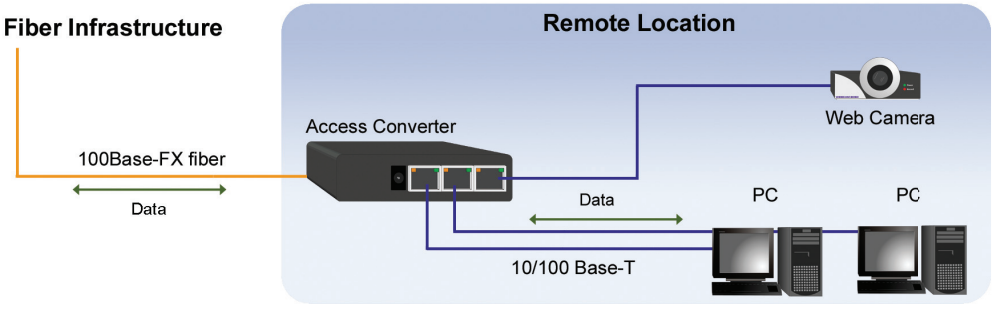
Ordering Information

AccessConverter

852-10140	AccessConverter, TX/3 + TX, 100 m
852-10150	AccessConverter, TX/3 + FX-MM850-ST, 2 km
852-10151	AccessConverter, TX/3 + FX-MM850-SC, 2 km
852-10141	AccessConverter, TX/3 + FX-MM1300-ST, 5 km
852-10142	AccessConverter, TX/3 + FX-MM1300-SC, 5 km
852-10141-MT	AccessConverter, TX/3 + FX-MM1300-MT, 5 km
852-10143	AccessConverter, TX/3 + FX-SM1310/PLUS-ST, 40 km
852-10144	AccessConverter, TX/3 + FX-SM1310/PLUS-SC, 40 km
852-10145	AccessConverter, TX/3 + FX-SM1310/LONG-ST, 80 km
852-10146	AccessConverter, TX/3 + FX-SM1310/LONG-SC, 80 km
852-10147	AccessConverter, TX/3 + FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
852-10153	AccessConverter, TX/3 + SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
852-10154	AccessConverter, TX/3 + SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
852-10155	AccessConverter, TX/3 + SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
852-10156	AccessConverter, TX/3 + SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
852-10157	AccessConverter, TX/3 + SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
852-10158	AccessConverter, TX/3 + SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Application Example

Provide media conversion capabilities for multiple network devices.



Auto Negotiation

Auto Cross

Mc Modules for MediaConverter Series

(McPIM, McLIM, McGigabit)

6-YEAR Comprehensive Warranty

A cost-effective solution for extending the life of legacy equipment and bringing fiber-to-the-desktop.

Product Overview

When copper-to-fiber or fiber-to-fiber conversions are required for network growth, the MediaConverter Module Series is the perfect solution.

B&B Electronics' MediaConverter Module Series enables easy and cost-effective connection of one type of media to other dissimilar media or networking products. This series extends the functionality and production life of both legacy cabling infrastructure and networking equipment when adding fiber to a network.

The MediaConverter Module Series includes:

McPIM:
- One 10 Mbps twisted pair port with an RJ-45 connector
- One 10 Mbps fiber port with ST, SC or MT-RJ connectors

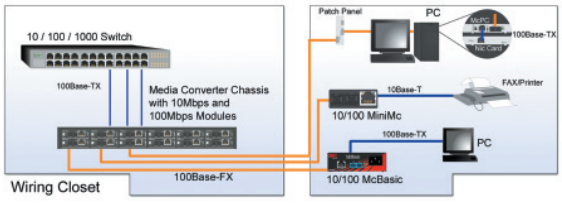
McLIM:
- One 100 Mbps twisted pair port with an RJ-45 connector
- One 100 Mbps fiber port with ST, SC or MT-RJ connectors

Switching McLIM TP-TX/FX:
- One 10/100 Mbps twisted pair port with an RJ-45 connector
- One 100 Mbps fiber port with ST or SC connectors
- Plug-and-play operation

McGigabit:
- One 1000 Mbps twisted pair port with an RJ-45 connector
- One 1000 Mbps fiber port with SC connectors
- Plug-and-play operation

Application Example

Install modules in any MediaConverter chassis. If the number of required conversions is high but rackmount space is limited, choose the 1U high, 12-slot chassis.



Features

Modules meet a variety of installation requirements
- Supports Ethernet, Fast Ethernet, and Gigabit Ethernet
- Supports very long fiber distances

A variety of chassis options
- Table-top or rackmountable
- 1, 4, 8 and 12-slot chassis
- 12-slot chassis is only 1U high
- AC power

Maximizes network uptime
- Modular, hot-swappable architecture reduces operational costs associated with product installation, upgrades and maintenance

Physical Specifications

Fiber Types Supported
- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
McPIM TP/FO: FCC Class A, CE
McLIM TX/FX: FCC Class B, CE
McGigabit: FCC Class B, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Shipping Weight:
0.7 lbs (0.3 kg)

Dimensions
0.75" H x 2.5" W x 4"D (2.20 x 6.41 x 10.25 cm)

Ordering Information

McPIM: TP/FO

855-12840	McPIM, TP/FO-MM850, ST, 2 km
855-12841	McPIM, TP/FO-MM850, SC, 2 km
855-12842	McPIM, TP/FO-MM1300, ST, 2 km
855-12843	McPIM, TP/FO-MM1300, SC, 2 km
855-12844	McPIM, TP/FO-SM1310/PLUS, ST, 40 km
855-12845	McPIM, TP/FO-SM1310/PLUS, SC, 40 km
855-12846	McPIM, TP/FO-SM1310/LONG, ST, 40 km
855-12847	McPIM, TP/FO-SM1310/LONG, SC, 40 km
855-12848	McPIM, TP/FO-SM1550/LONG, ST, 80 km
855-12849	McPIM, TP/FO-SM1550/LONG, SC, 80 km

McLIM: TX/FX

855-12662	McLIM, TX/SX-MM850, ST, 2 km
855-12663	McLIM, TX/SX-MM850, SC, 2 km
855-12660	McLIM, TX/FX-MM1300, ST, 5 km
855-12661	McLIM, TX/FX-MM1300, SC, 5 km
855-12664	McLIM, TX/FX-SM1310/PLUS, ST, 40 km
855-12665	McLIM, TX/FX-SM1310/PLUS, SC, 40 km
855-12668	McLIM, TX/FX-SM1310/LONG, SC, 80 km
855-12669	McLIM, TX/FX-SM1550/LONG, SC, 80 km
Single-Strand Fiber	
855-12680	McLIM, TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
855-12681	McLIM, TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
855-12682	McLIM, TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-12683	McLIM, TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-12684	McLIM, TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
855-12685	McLIM, TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

McLIM: TP-TX/FX and TP-TX/SX

855-12620	McLIM, TP-TX/SX-MM850-ST, 220/550 m
855-12621	McLIM, TP-TX/SX-MM850-SC, 220/550 m
855.12622	McLIM, TP-TX/FX-MM1300-ST, 5 km
855-12623	McLIM, TP-TX/FX-MM1300-SC, 5 km
855-12624	McLIM, TP-TX/FX-SM1310/PLUS-ST, 40 km
855-12625	McLIM, TP-TX/FX-SM1310/PLUS-SC, 40 km
Single-Strand Fiber	
855-12642	McLIM, TP-TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
855-12643	McLIM, TP-TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
855-12644	McLIM, TP-TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-12645	McLIM, TP-TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km

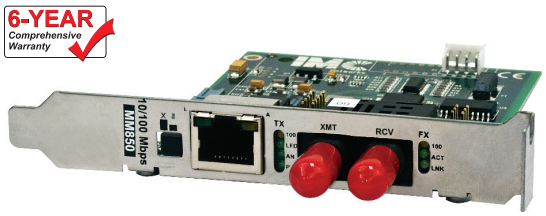
McGigabit: TX/SX and TX/LX

855-12670	McGigabit, TX/SX-MM850-SC, 220/550 m
855-12691	McGigabit, TX/SX-MM1300-SC, 2 km
855-12671	McGigabit, TX/LX-SM1310-SC, 15 km
855-12672	McGigabit, TX/LX-SM1310/PLUS-SC, 40 km
855-12673	McGigabit, TX/LX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
855-12674	McGigabit, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
855-12675	McGigabit, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
855-12694	McGigabit, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
855-12695	McGigabit, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
855-12676	McGigabit, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-12677	McGigabit, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
855-12696	McGigabit, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
855-12697	McGigabit, TX/SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
855-12686	McGigabit, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
855-12687	McGigabit, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km
855-12688	McGigabit, TX/SSLX-SM1490/XLONG-SC (1490xmt/1550rcv), 80 km
855-12689	McGigabit, TX/SSLX-SM1550/XLONG-SC (1550xmt/1490rcv), 80 km

Use with Chassis Platform

MediaConverter Series, See Page 46

McPC Series



Ideal for fiber-to-the-desktop applications, the McPC installs directly inside a PC.

Product Overview

Easily connect fiber to a PC or server with the McPC series of media converters. Installing inside the PC or server, McPC converters are the perfect, low cost alternative to fiber NICs or external media converters.

The McPC series includes:

- **McPC 100 Mbps**, converting copper to fiber at 100 Mbps
- **McPC 10/100 Mbps**, converting 10 Mbps copper to 10 Mbps fiber or 100 Mbps copper to 100 Mbps fiber

The McPC series supports 10, 100 & 10/100 protocols and is available for virtually any fiber type, from short-haul multi-mode to long-haul single-mode, with standard ST or SC connectors.

Ease of installation and a variety of Ethernet speed options make the McPC series the perfect solution for FTTD applications and for enterprises with changing requirements such as adding new employees and frequently changing workstation locations.

Features

- Save money by keeping the existing copper NIC and converting inside PC
- No drivers to install; McPC mounts inside any PC or workstation with a standard PCI or ISA slot
- Includes a standard 4-pin peripheral power connector
- Supports Half and Full-Duplex operation
- Includes diagnostic LEDs

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, UL/cUL, CSA, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-4° to +158°F (-20° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Shipping Weight:
0.60 lbs (0.22 kg)

Ordering Information

ISA

McPC TX/FX 100 Mbps

855-13127	McPC/ISA, TX/FX-MM1300, ST, 5 km
855-13128	McPC/ISA, TX/FX-MM1300, SC, 5 km
855-13328	McPC/ISA, TX/FX-SM1310/PLUS, SC, 40 km

McPC 10/100 Mbps

855-13260	McPC/ISA, 10/100-MM850, ST, 2 km
855-13261	McPC/ISA, 10/100-MM850, SC, 2 km
855-13263	McPC/ISA, 10/100-MM1300, SC, 5 km

PCI

McPC TX/FX 100 Mbps

855-12127	McPC/PCI, TX/FX-MM1300, ST, 5 km
855-12128	McPC/PCI, TX/FX-MM1300, SC, 5 km
855-12328	McPC/PCI, TX/FX-SM1310/PLUS, SC, 40 km

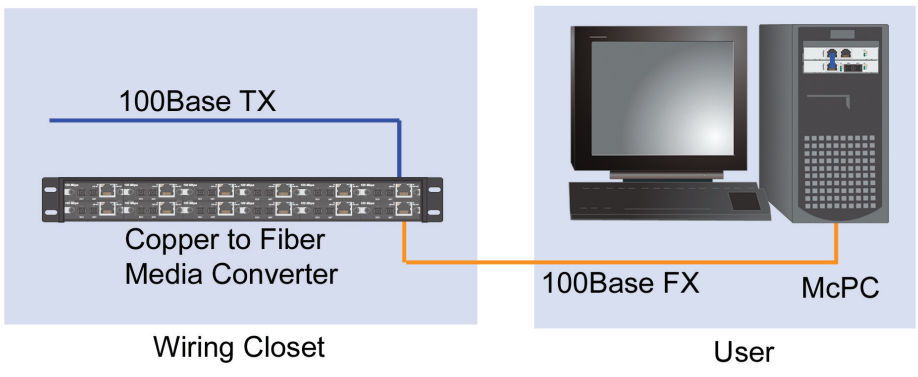
McPC 10/100 Mbps

855-12260	McPC/PCI, 10/100-MM850, ST, 2 km
855-12261	McPC/PCI, 10/100-MM850, SC, 2 km
855-12263	McPC/PCI, 10/100-MM1300, SC, 5 km

Available Accessories

806-39230	SATA Cable for McPC

Application Example



Auto Negotiation | Fiber Alert | Link Loss

McPC-MediaLinX Series

6-YEAR Comprehensive Warranty

Ideal for fiber-to-the-desktop applications, the McPC installs directly inside a PC.

Product Overview

Easily connect fiber to a PC or server with the McPC series of converters. Installing inside the PC or server, McPC converters are the perfect, low cost alternative to fiber NICs or external media converters.

The McPC-MediaLinX Series includes:

- **McPC MediaLinX Switching Ethernet**
  - A rate converter as well as a media converter, the McPC MediaLinX Switching Ethernet converts 10 or 100 Mbps over copper to 100 Mbps over fiber
- **McPC-Giga-MediaLinX Switching Gigabit Ethernet**
  - A rate converter as well as a media converter, the McPC-Giga-MediaLinX Switching converts 10, 100 or 1000 Mbps over copper to 1000 Mbps over fiber

The McPC-MediaLinX series supports 10/100 & 10/100/1000 protocols and is available for virtually any fiber type, from short-haul multi-mode to long-haul single-mode, with standard ST or SC connectors.

Ease of installation and a variety of Ethernet speed options make the McPC-MediaLinX series the perfect solution for FTTD applications and for enterprises with changing requirements such as adding new employees and frequently changing workstation locations.

Features

- Save money by keeping the existing copper NIC and converting inside PC
- No drivers to install; McPC-MediaLinx and McPC-Giga-MediaLinX mounts inside any PC or workstation with a standard PCI or ISA slot
- Includes a standard 4-pin peripheral power connector
- Supports Half and Full-Duplex operation
- Includes diagnostic LEDs

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

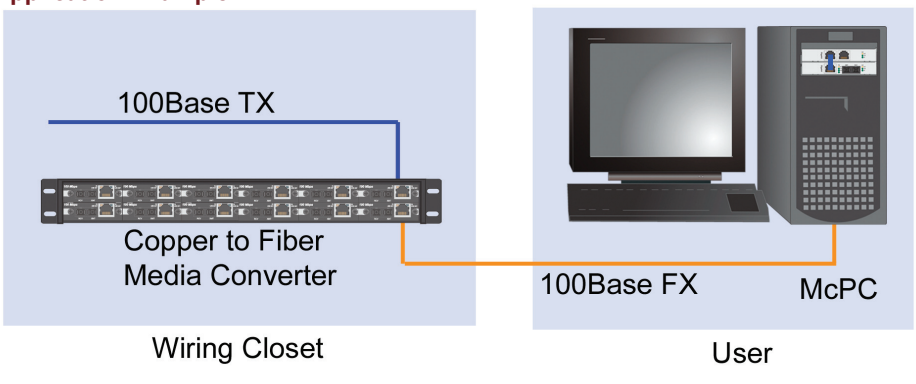
Storage Temperature:
-4° to +158°F (-20° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Shipping Weight:
0.60 lbs (0.22 kg)

Application Example



Ordering Information

PCI
McPC-MediaLinX Switching Ethernet (10/100 Mbps)

855-12731	McPC/PCI-MediaLinX, MM850, SC, 2 km
855-12733	McPC/PCI-MediaLinX, MM1300, SC, 5 km
855-12735	McPC/PCI-MediaLinX, SM1310/PLUS, SC, 40 km

LowPCI
McPC-MediaLinX Switching Ethernet (10/100 Mbps)

855-15733	McPC/LowPCI-MediaLinX, MM1300, SC, 5 km
855-15735	McPC/LowPCI-MediaLinX, SM1310/PLUS, SC, 40 km

PCI
McPC-Giga-MediaLinX Switching Ethernet (10/100/1000 Mbps)

855-12920	McPC/PCI-Giga-MediaLinX, TX/SX-MM850, SC 220/550 m
855-12921	McPC/PCI-Giga-MediaLinX, TX/LX-SM1300, SC 15 km
855-12922	McPC/PCI-Giga-MediaLinX, TX/LX-SM1310/PLUS, SC 40 km
855-12924	McPC/PCI-Giga-MediaLinX, TX/LX-SM1550/LONG, SC, 80 km
Single-Strand Fiber	
855-12927	McPC/PCI-Giga-MediaLinX, TX/SSLX-SM1310, SC, 15 km
855-12928	McPC/PCI-Giga-MediaLinX, TX/SSLX-SM1550, SC, 15 km
855-12929	McPC/PCI-Giga-MediaLinX, TX/SSLX-SM1310/PLUS, SC, 40 km
855-12930	McPC/PCI-Giga-MediaLinX, TX/SSLX-SM1550/LONG, SC, 40 km

LowPCI
McPC-Giga-MediaLinX Switching Ethernet (10/100/1000 Mbps)

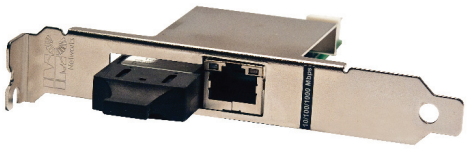
855-15919	McPC/LowPCI-Giga-MediaLinX,TX/SFP, Various
855-15920	McPC/LowPCI-Giga-MediaLinX, TX/SX-MM850,SC, 220/550 m
855-15921	McPC/LowPCI-Giga-MediaLinX, TX/LX-SM1310-SC, 15 km

Available Accessories

806-39230	SATA Cable for McPC

McPC-Gigabit Series

6-YEAR Comprehensive Warranty



Ideal for fiber-to-the-desktop applications, the McPC installs directly inside a PC.

Product Overview

Easily connect fiber to a PC or server with the McPC series of converters. Installing inside the PC or server, McPC converters are the perfect, low cost alternative to fiber NICs or external media converters.

The McPC-Gigabit series includes:

- **McPC-Gigabit**, converting copper to fiber at 1.25 Gbps

The McPC-Gigabit series supports Gigabit protocols and is available for virtually any fiber type, from short-haul multi-mode to long-haul single-mode, with standard SC connectors.

Ease of installation and a variety of distance options make the McPC-Gigabit series the perfect solution for FTTD applications and for enterprises with changing requirements such as adding new employees and frequently changing workstation locations.

Features

- Save money by keeping the existing copper NIC and converting inside PC
- No drivers to install; McPC-Gigabit mounts inside any PC or workstation with a standard PCI slot
- Includes a standard 4-pin peripheral power connector
- Supports Half and Full-Duplex operation
- Includes diagnostic LEDs

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-4° to +158°F (-20° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Shipping Weight:
0.60 lbs (0.22 kg)

Ordering Information

PCI

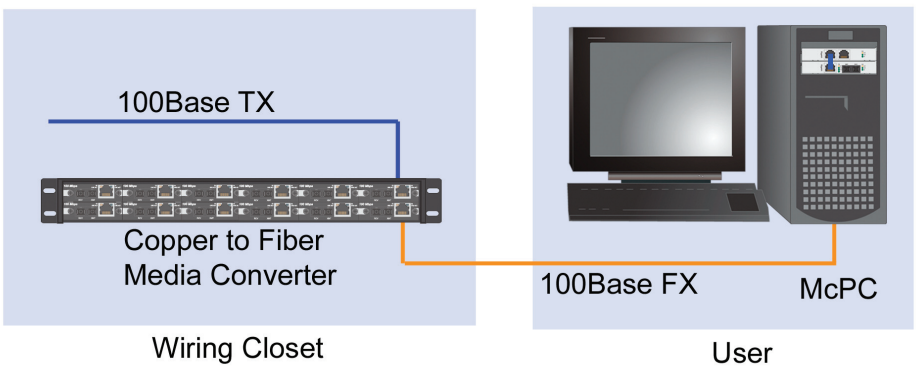
McPC-Gigabit

855-12900	McPC/PCI-Gigabit, TX/SX-MM850-SC, 220/550 m
855-12901	McPC/PCI-Gigabit, TX/LX-SM1310-SC, 15 km
855-12902	McPC/PCI-Gigabit, TX/LX-SM1310/PLUS-SC, 40 km
855-12903	McPC/PCI-Gigabit, TX/LX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
855-12904	McPC/PCI-Gigabit, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 15 km
855-12905	McPC/PCI-Gigabit, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 15 km
855-12906	McPC/PCI-Gigabit, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
855-12907	McPC/PCI-Gigabit, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km

Available Accessories

806-39230	SATA Cable for McPC

Application Example



Auto Negotiation | Fiber Alert | Link Loss

WDM/2 Series

6-YEAR Comprehensive Warranty

With WDM products, service providers and enterprise network managers can easily double fiber capacity and integrate multiple protocols.

Product Overview

Wavelength Division Multiplexing (WDM) is a technology that enables the transmitting of multiple, optical signals on different wavelengths over one strand of fiber. The series is designed for installations where fiber is limited in terms of availability. Service providers and enterprise network managers can easily double their fiber capacity without incurring the costs associated with installing new fiber. Campus area network managers can deploy the B&B Electronics WDM solution, for example, to combine voice and data traffic over the same duplex fiber between company facilities.

Protocol and speed-independent; available in standalone and modular versions

The WDM/2 and iMcV-WDM are two-channel, passive, protocol and speed-independent Wavelength Division Multiplexers that allow two individual wavelengths to share one fiber pair; Full-Duplex data travels on 1310 nm and 1550 nm to virtually double the capacity of installed fiber. Deploy WDM products in pairs so that the host site will multiplex 1310 nm and 1550 nm onto the fiber and the remote site will then separate the signals by the wavelength. Available in standalone and modular versions, protocol-independent WDM products enable the transmitting of any protocol and any speed over 1310 nm or 1550 nm single-mode fiber.

Supports a variety of protocols; easy installation

As passive, protocol-independent Wavelength Division Multiplexers, WDM/2 and iMcV-WDM comply with a wide range of communications protocols including Ethernet (10/100/1000 Mbps), SONET/SDH (OC-3, OC-12, OC-48), FDDI, ATM, ESCON, T1/E1, E3, DS3 and Fibre Channel. Installing WDM products is easy — the standalone WDM/2 chassis comes ready to install and iMcV-WDM modules slide into any B&B Electronics iMediaChassis or MediaChassis/2. No configuration is required for either version.

Features

Leverages investment on existing fiber infra-structure

- Doubles the capacity of installed fiber by transmitting two wavelengths on one strand of fiber

Supports multiple protocols

- Speed and protocol-independent, supporting 1310 nm and 1550 nm single-mode fiber

Easy to install - no configuration

- Just slide the iMcV-WDM/2 into a chassis and match the fiber connectors with the 1310 nm and 1550 nm wavelengths
- WDM/2 chassis performs multiplexing with NO outside power requirement
- Requires two slots in a chassis; modules are double-wide

Maximizes network uptime

- Modular, hot-swappable architecture reduces operational costs associated with product installation, upgrades and maintenance

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
SC

Regulatory Approvals:
FCC Class A, UL/cUL, CSA, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Shipping Weight:
0.9 lbs (0.34 kg) Module
1.1 lbs (0.50 kg) Standalone Chassis

Ordering Information

iMcV-WDM/2 (Double Wide Module)

849-14100 iMcV-WDM/2-SM1310-SC

WDM/2 (Stand Alone Chassis)

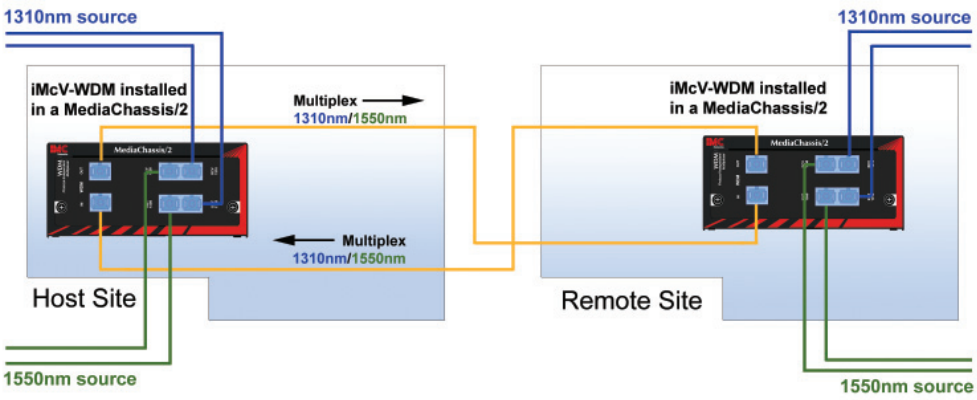
849-10100 WDM/2-SM1310-SC

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Application Example

Connect two fiber network segments using a single strand.



IE-iMcV-MuxDemux/4

6-YEAR Comprehensive Warranty

The IE-iMcV-MuxDemux/4 is a CWDM Passive Multiplexing/Demultiplexing Module

Product Overview

Coarse Wavelength Division Multiplexing (CWDM) is a technology that enables the transmission of multiple optical signals on different wavelengths over one strand of fiber. Suited for installations where fiber is limited in terms of availability, service providers and enterprise network managers can easily multiply their fiber capacity without incurring the costs associated with installing new fiber. For customers deploying high-end gigabit switches, the IE-iMcV-MuxDeMux/4 is ideal for supplying the growing need for greater bandwidth over fiber.

The IE-iMcV-MuxDemux/4 is a dual-wide module that provides 4 channels (8 channels using two modules) of CWDM, a network port for connecting two modules back-to-back, and an expansion port that can accommodate an existing 1310nm fiber network and for cascading a second unit.

The IE-iMcV-MuxDemux/4 modules are entirely passive, requiring no external power to function. The IE-MuxDemuxChassis/2 is an unpowered, 1U high chassis, specially designed to house the IE-iMcV-MuxDemux/4, although it can be installed in compatible MediaChassis and iMediaChassis.

Features

Leverages Investment on Existing Fiber Infrastructure

- Add up to 8 CWDM channels to an existing 1310nm network
- Speed and protocol independent (up to 10 Gbps)
- Low insertion loss

Easy to install; no configuration

- Install the IE-iMcV-MuxDemux/4 into a compatible chassis and match the fiber connectors with the 1470nm through 1610nm wavelengths
- Module performs multiplexing with no external power requirement
- Requires two slots in a compatible chassis

Perfect for a variety of applications

- Daisy chain 2 modules together for 8 CWDM channels + one 1310nm over duplex fiber
- Designed with industry standard LC fiber connectors
- Modular, hot-swappable architecture reduces operational costs associated with product installation, upgrades and maintenance
- IE model supports extended temperature

Physical Specifications

Connectors:
LC

Operating Temperature:
-40° F to +185° F (-40° C to +85° C)

Storage Temperature:
-40° F to +185° F (-40° C to +85° C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
Double-wide, two slot chassis module

Shipping Weight:
0.9 lbs (0.34 kg)

FREE iVIEW² Device Management Application
SNMP Management Software

Use with Other Chassis Platforms

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Ordering Information

IE-iMcV-MuxDemux/4

844-18147	IE-iMcV-MuxDemux/4, 1470-1530-LC
844-18155	IE-iMcV-MuxDemux/4, 1550-1610-LC

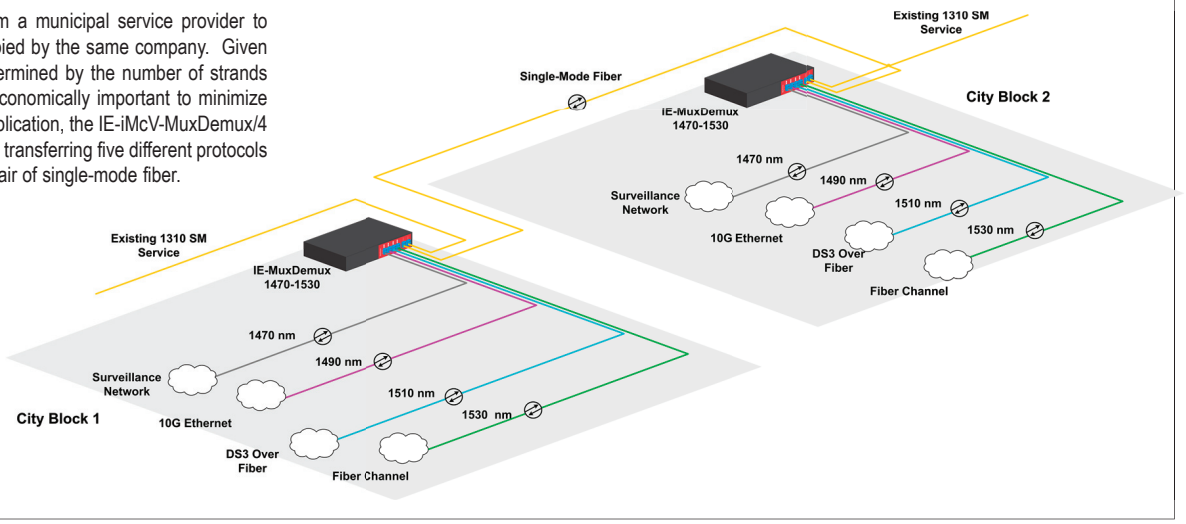
Chassis

IE-MuxDemuxChassis/2

850-36102	IE-MuxDemuxChassis/2

Application Example

Often a company will rent fiber from a municipal service provider to connect two buildings that are occupied by the same company. Given that the cost of fiber is typically determined by the number of strands leased and distance traveled, it is economically important to minimize the number of fibers used. In this application, the IE-iMcV-MuxDemux/4 is an ideal cost-saving solution that is transferring five different protocols and varying speeds over the same pair of single-mode fiber.



CWDM | Industrial Ethernet

IE-iMcV-2xLIM

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

Double your media conversion capacity with the IE-iMcV-2xLIM SNMP-manageable media converter modules.

Product Overview

The IE-iMcV-2xLIM, TX/SFP is a Fast Ethernet module which provides two conversions of 100Base-TX twisted pair to 100Base-FX/SX single-mode or multi-mode fiber. There are two sets of ports, RJ-45 (copper) and SFP (fiber). The SFP port supports all MSA and Cisco compliant, SC, LC and single-fiber 155 Mbps SFPs. Designed as a Layer 1 device, the IE-iMcV-2xLIM is entirely transparent to both Layer 2 and Layer 3 protocols. The IE-iMcV-2xLIM is SNMP-manageable and can be installed into the modular, SNMP-manageable iMediaChassis or the MediaChassis series.

Easily configure and manage converters with the GUI-based iView². As an SNMP management application, iView² gives network managers the ability to monitor and control B&B Electronics' products. iView² runs standalone on Windows NT/XP/2000 or as a Web Server running under IIS. For assistance in selecting the right version of iView² for your operating system, visit our web site at: http://www.imcnetworks.com/Products/iView2.cfm

Features

Cost-effective and flexible
- Functions as two independent copper to fiber media converters, thus doubling port density in the iMediaChassis and MediaChassis product lines

Maximizes network uptime
- 100 Mbps SFPs and 2xLIM modules are hot-swappable; no need to power-down chassis when upgrading or troubleshooting a single module

Eases Troubleshooting
- Far End Fault provides notification of Far End Link Loss on the fiber port.
- Link Fault Pass-Through (LFPT) is a troubleshooting feature that monitors the copper (TXLL) and fiber (FXLL) ports of the unit; if a port loses LINK, the unit disables the transmitting signal on the other port and notifies the user via LED
- Config Control retains the latest module configuration if it's replaced, regardless of how the initial configuration was setup; whether by DIP Switch or SNMP Management Module

Physical Specifications

Connectors:
2 x RJ-45 and 2 x SFP ports (SFPs sold separately)

Regulatory Approvals:
FCC Class B
UL, CSA, CE
TUV

Operating Temperature:
-40° F to +176° F (-40° C to +80° C)

Storage Temperature:
-40° F to +176° F (-40° C to +80° C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:
0.30 lbs (0.11 kg)

Config Control

Configuration Control

Its main function is to assist the end-user by retaining the latest configuration regardless of how the initial configuration was setup, whether through DIP Switch settings or the SNMP Management Module's configuration.

**** Notes: Modules with the Config Control Feature**
- iView² v.1.8.9 and SNMP Firmware v.C4 must be installed to use IMC's Configuration Control Feature
- iMcV-Modules that offer Configuration Control are identified by the label on the front faceplate and reference a different part number.
- New replacement products are **NOT** backwards compatible with the iMediaChassis/18

Ordering Information

*** ** IE-iMcV-2xLIM, TX/SFP**

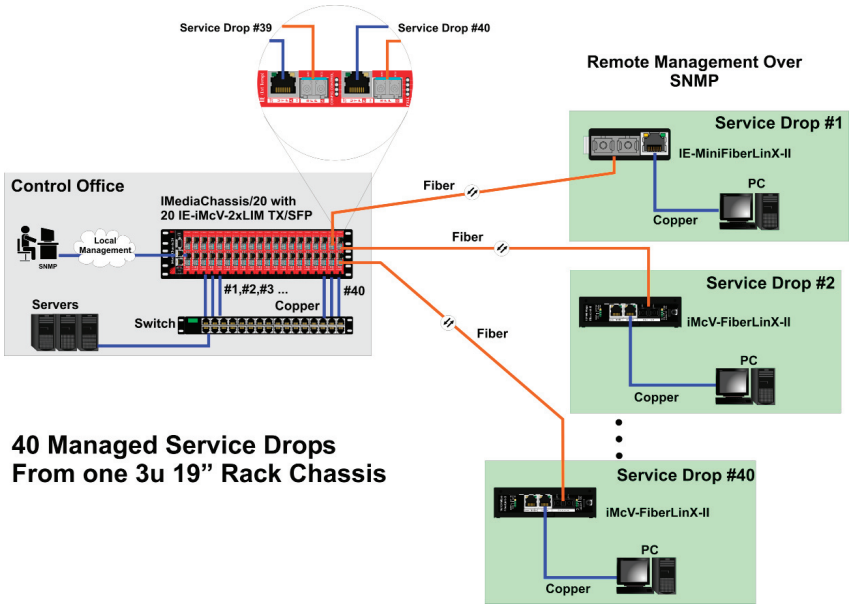
850-18610	IE-iMcV-2xLIM, TX/SFP (requires IE-SFP/155 module(s)), Various

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Application Example

Populating a iMediaChassis/20 with 20 IE-iMcV-2xLIM modules doubles the number of lines that can be served in an ISP network environment at a lower cost. Additionally, it improves remote management through the use of the FEF and LFPT functions and through DDMI on select SFPs.



40 Managed Service Drops From one 3u 19" Rack Chassis

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | LFPT | Config Control

iMcV-PIM, iMcV-LIM Modules

6-YEAR Comprehensive Warranty

Monitor and control all connections from a central site with SNMP-manageable "iMcV-" media conversion modules.

Product Overview

Satisfying today's networking needs while preparing for tomorrow's cabling requirements can make designing and installing the physical layer of networks a daunting task. The decreasing cost of fiber optic cabling and switching equipment makes all-optical LANs the obvious choice when future-proofing network equipment. Replacing legacy equipment and wiring infrastructure is a costly choice. Managed media conversion allows implementation of new technologies on existing networks, while monitoring all connections, to keep networks running and up-to-date.

B&B Electronics offers a wide range of SNMP-managed Ethernet copper to fiber media converters, with a choice of fixed rate or rate conversion capabilities. The "iMcV-" modules also include troubleshooting features and LEDs to assist in network diagnostics as well as make isolating cable breaks easier. The 100 Mbps iMcV-Lim also features Link Fault Pass-Through. In addition, replacing the hot-swappable modules won't disable other modules services running within the same chassis during product upgrades or maintenance and troubleshooting.

All converters feature an RJ-45 copper port and a fiber port, with a choice of SC or ST connectors.

"iMcV-" media converters include:

- iMcV-PIM - convert 10 Mbps copper to 10 Mbps fiber
- iMcV-LIM - convert 100 Mbps copper to 100 Mbps fiber
- iMcV-LIM 10/100 - convert 10 Mbps copper to 10 Mbps fiber or 100 Mbps copper to 100 Mbps fiber

Config Control

Configuration Control

Its main function is to assist the end-user by retaining the latest configuration regardless of how the initial configuration was setup, whether through DIP Switch settings or the SNMP Management Module's configuration.

*** Notes: Modules with the Config Control Feature**

- iView² v.1.8.9 and SNMP Firmware v.C4 must be installed to use IMC's Configuration Control Feature
- iMcV-Modules that offer Configuration Control are identified by the label on the front faceplate and reference a different part number.
- New replacement products are **NOT** backwards compatible with the iMediaChassis/18

Features

Meets a variety of installation requirements

- Choose from a wide range of speeds up to Fast Ethernet
- Available for multi-mode or single-mode fiber
- Double fiber capacity with single-strand fiber versions
- Supports very long fiber distances

Easy to configure and manage with GUI-based iView²

- Up and running in less than five minutes
- Monitor links and receive vital traffic and health information and notification should problems occur

Maximizes network uptime

- Modular, hot-swappable architecture reduces operational costs associated with product installation, upgrades and maintenance

Configuration Control

- Retains the latest configuration

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:
0.30 lbs (0.11 kg)

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

CWDM versions available, See website for details

Ordering Information

iMcV-PIM 10 Mbps

850-14940	iMcV-PIM, TP/FO-MM850-ST, 2 km
850-14941	iMcV-PIM, TP/FO-MM850-SC, 2 km
850-14942	iMcV-PIM, TP/FO-MM1300-ST, 2 km
850-14943	iMcV-PIM, TP/FO-MM1300-SC, 2 km
850-14944	iMcV-PIM, TP/FO-SM1310/PLUS-ST, 40 km
850-14945	iMcV-PIM, TP/FO-SM1310/PLUS-SC, 40 km
850-14946	iMcV-PIM, TP/FO-SM1310/LONG-ST, 40 km
850-14947	iMcV-PIM, TP/FO-SM1310/LONG-SC, 40 km
850-14949	iMcV-PIM, TP/FO-SM1550/LONG-SC, 80 km

iMcV-LIM TX/FX 100 Mbps with (LFPT) and Config Control *

850-15611	iMcV-LIM, TX/SX-MM850-ST, 2 km
850-15612	iMcV-LIM, TX/SX-MM850-SC, 2 km
850-15613	iMcV-LIM, TX/FX-MM1300-ST, 5 km
850-15614	iMcV-LIM, TX/FX-MM1300-SC, 5 km
850-15617	iMcV-LIM, TX/FX-SM1310/PLUS-ST, 40 km
850-15618	iMcV-LIM, TX/FX-SM1310/PLUS-SC, 40 km
850-15619	iMcV-LIM, TX/FX-SM1310/LONG-ST, 80 km
850-15620	iMcV-LIM, TX/FX-SM1310/LONG-SC, 80 km
850-15622	iMcV-LIM, TX/FX-SM1550/LONG-SC, 80 km
850-15623	iMcV-LIM, TX/FX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
850-15631	iMcV-LIM, TX/SSFX-MM1310-SC (1310xmt/1550rcv), 2 km
850-15632	iMcV-LIM, TX/SSFX-MM1550-SC (1550xmt/1310rcv), 2 km
850-15633	iMcV-LIM, TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
850-15634	iMcV-LIM, TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
850-15635	iMcV-LIM, TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
850-15636	iMcV-LIM, TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
850-15637	iMcV-LIM, TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
850-15638	iMcV-LIM, TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

iMcV-LIM TX/FX 10/100 Mbps

850-14260	iMcV-LIM, 10/100-MM850-ST, 2 km
850-14261	iMcV-LIM, 10/100-MM850-SC, 2 km
850-14262	iMcV-LIM, 10/100-MM1300-ST, 5 km
850-14263	iMcV-LIM, 10/100-MM1300-SC, 5 km
850-14267	iMcV-LIM, 10/100-SM1310/PLUS-ST, 40 km
850-14268	iMcV-LIM, 10/100-SM1310/PLUS-SC, 40 km
850-14269	iMcV-LIM, 10/100-SM1310/LONG-ST, 80 km
850-14270	iMcV-LIM, 10/100-SM1310/LONG-SC, 80 km
850-14274	iMcV-LIM, 10/100-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
850-14240	10/100-SSFX-MM1310-SC (1550 rcv), 2 km
850-14243	10/100-SSFX-MM1550-SC (1310 rcv), 2 km
850-14244	10/100-SSFX-SM1310-SC (1550 rcv), 20 km
850-14245	10/100-SSFX-SM1550-SC (1310 rcv), 20 km
850-14246	10/100-SSFX-SM1310/PLUS-SC (1550 rcv), 40 km
850-14247	10/100-SSFX-SM1550/PLUS-SC (1310 rcv), 40 km
850-14248	10/100-SSFX-SM1310/LONG-SC (1550 rcv), 60 km
850-14249	10/100-SSFX-SM1550/LONG-SC (1310 rcv), 60 km

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | LFPT | Config Control

iMcV-Gigabit Modules

* SFPs Sold Separately

Monitor and control all connections from a central site with SNMP-manageable "iMcV-" media conversion modules.

Product Overview

Satisfying today's networking needs while preparing for tomorrow's cabling requirements can make designing and installing the physical layer of networks a daunting task. The decreasing cost of fiber optic cabling and switching equipment makes all-optical LANs the obvious choice when future-proofing network equipment. Replacing legacy equipment and wiring infrastructure is a costly choice. Managed media conversion allows implementation of new technologies on existing networks, while monitoring all connections, to keep networks running and up-to-date.

B&B Electronics offers a range of SNMP-managed Ethernet copper to fiber media converters, with a choice of fixed rate or rate conversion capabilities. The "iMcV-" modules also include troubleshooting features and LEDs to assist in network diagnostics as well as make isolating cable breaks easier. In addition, replacing the hot-swappable modules won't disable other modules services running within the same chassis, during product upgrades or maintenance and troubleshooting.

All converters feature an RJ-45 copper port and a fiber port with SC connectors.

"iMcV-" media converters include:

- iMcV-Gigabit - convert copper to fiber at a data rate of up to 1.25 Gbps

Features

Meets a variety of installation requirements

- Available for multi-mode or single-mode fiber
- Double fiber capacity with single-strand fiber versions
- Supports very long fiber distances

Easy to configure and manage with GUI-based iView²

- Up and running in less than five minutes
- Monitor links and receive vital traffic and health information and notification should problems occur

Maximizes network uptime

- Modular, hot-swappable architecture reduces operational costs associated with product installation, upgrades and maintenance

Configuration Control

- Retains the latest configuration

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class A, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

IE Operating Temperature:
-40° to + 185°F(-40° to +85°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:
0.30 lbs (0.11 kg)

Ordering Information

* **IE-iMcV-Gigabit TX/SFP 1000 Mbps with Link Fault Pass-Through (LFPT) and Config Control

850-18510	IE-iMcV-Gigabit, TX/SFP (requires one IE-SFP/1250 module)

** iMcV-Gigabit TX/FX 1000 Mbps with Link Fault Pass-Through (LFPT) and Config Control

850-15511	iMcV-Gigabit, TX/SX-MM850-SC, 220/550 m
850-15512	iMcV-Gigabit, TX/LX-SM1310-SC, 10 km
850-15513	iMcV-Gigabit, TX/LX-SM1310/PLUS-SC, 40 km
850-15514	iMcV-Gigabit, TX/LX-SM1550/LONG-SC, 80 km
850-15515	iMcV-Gigabit, TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
850-15521	iMcV-Gigabit, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 10 km
850-15522	iMcV-Gigabit, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 10 km
850-15523	iMcV-Gigabit, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
850-15524	iMcV-Gigabit, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
850-15525	iMcV-Gigabit, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
850-15526	iMcV-Gigabit, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
850-15527	iMcV-Gigabit, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
850-15528	iMcV-Gigabit, TX/SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
850-15529	iMcV-Gigabit, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
850-15530	iMcV-Gigabit, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km

CWDM versions available, See website for details

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Configuration Control
Is available on select models of the iMcV-Gigabit and IE-iMcV-Gigabit SFP with LFPT. Its main function is to assist the end-user by retaining the latest configuration regardless of how the initial configuration was setup, whether through DIP Switch settings or the SNMP Management Module's configuration.

**** Notes: Modules with the Config Control Feature**

- iView² v.1.8.9 and SNMP Firmware v.C4 must be installed to use IMC's Configuration Control Feature
- iMcV-Modules that offer Configuration Control are identified by the label on the front faceplate and reference a different part number.
- New replacement products are **NOT** backwards compatible with the iMediaChassis/18

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | LFPT | Config Control

iMcV-MediaLinX, iMcV-Giga-MediaLinX Modules

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

Monitor and control all connections from a central site with SNMP-manageable "iMcV-" media conversion modules.

Product Overview

Satisfying today's networking needs while preparing for tomorrow's cabling requirements can make designing and installing the physical layer of networks a daunting task. The decreasing cost of fiber optic cabling and switching equipment makes all-optical LANs the obvious choice when future-proofing network equipment. Replacing legacy equipment and wiring infrastructure is a costly choice. Managed media conversion allows implementation of new technologies on existing networks, while monitoring all connections, to keep networks running and up-to-date.

B&B Electronics offers a wide range of SNMP-managed Ethernet copper to fiber media converters, with a choice of fixed rate or rate conversion capabilities. The "iMcV-" modules also include troubleshooting features and LEDs to assist in network diagnostics as well as make isolating cable breaks easier. The iMcV-MediaLinX and iMcV-Giga-MediaLinX also features Link Fault Pass-Through. In addition, replacing the hot-swappable modules won't disable other modules services running within the same chassis, during product upgrades or maintenance and troubleshooting.

All converters feature an RJ-45 copper port and a fiber port, with a choice of SC or ST (non-Gigabit only) connectors.

"iMcV-" media and rate converters include:

- iMcV-MediaLinX – convert 10 Mbps or 100 Mbps copper to 100 Mbps fiber
- iMcV-Giga-MediaLinX – convert 10 Mbps, 100 Mbps or 1000 Mbps copper to 1000 Mbps fiber

Rate converters employ Auto Negotiation functionality on the twisted pair port for plug-and-play operation, or they can be manually configured for the desired speed and duplex mode.

Config Control

Configuration Control

Is available on select models of the iMcV-MediaLinx and IE-iMcV-MediaLinX TX/SFP. Its main function is to assist the end-user by retaining the latest configuration regardless of how the initial configuration was setup, whether through DIP Switch settings or the SNMP Management Module's configuration.

**** Notes: Modules with the Config Control Feature**

- iView² v.1.8.9 and SNMP Firmware v.C4 must be installed to use IMC's Configuration Control Feature
- iMcV-Modules that offer Configuration Control are identified by the label on the front faceplate and reference a different part number.
- New replacement products are **NOT** backwards compatible with the iMediaChassis/18

Features

Meets a variety of installation requirements

- Choose from a range of speeds up to Gigabit Ethernet
- Available for multi-mode or single-mode fiber
- Double fiber capacity with single-strand fiber versions
- Supports very long fiber distances

Easy to configure and manage with GUI-based iView²

- Up and running in less than five minutes
- Monitor links and receive vital traffic and health information and notification should problems occur

Maximizes network uptime

- Modular, hot-swappable architecture reduces operational costs associated with product installation, upgrades and maintenance

Configuration Control

- Retains the latest configuration

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45, ST and SC

Regulatory Approvals:
FCC Class B, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

IE Operating Temperature:
-40° to + 185°F(-40° to +85°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:
0.30 lbs (0.11 kg)

Use with Chassis Platform
iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

CWDM versions available, See website for details

Ordering Information

* **IE-iMcV-MediaLinX TX/SFP 10/100 Mbps with Link Fault Pass-Through (LFPT) and Config Control

856-18700	IE-iMcV-MediaLinX, TX/SFP (requires one SFP/155-ED Module required)

iMcV-MediaLinX TX/FX 10/100 Mbps with Link Fault Pass-Through (LFPT) and Config Control **

856-15711	iMcV-MediaLinX, TX/FX-MM850-ST, 2 km
856-15712	iMcV-MediaLinX, TX/FX-MM850-SC, 2 km
856-15713	iMcV-MediaLinX, TX/FX-MM1300-ST, 5 km
856-15714	iMcV-MediaLinX, TX/FX-MM1300-SC, 5 km
856-15717	iMcV-MediaLinX, TX/FX-SM1310/PLUS-ST, 40 km
856-15718	iMcV-MediaLinX, TX/FX-SM1310/PLUS-SC, 40 km
856-15719	iMcV-MediaLinX, TX/FX-SM1310/LONG-ST, 80 km
856-15720	iMcV-MediaLinX, TX/FX-SM1310/LONG-SC, 80 km
856-15723	iMcV-MediaLinX, TX/FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
856-15731	iMcV-MediaLinX, TX/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
856-15732	iMcV-MediaLinX, TX/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
856-15733	iMcV-MediaLinX, TX/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-15734	iMcV-MediaLinX, TX/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-15735	iMcV-MediaLinX, TX/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
856-15736	iMcV-MediaLinX, TX/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

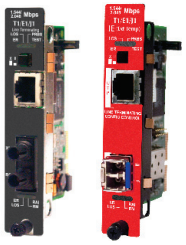
iMcV-Giga-MediaLinX TX/LX 10/100/1000 Mbps with Link Fault Pass-Through (LFPT)

856-11959	iMcV-Giga-MediaLinX, TX/SX-MM850-ST, 220/550 m
856-11950	iMcV-Giga-MediaLinX, TX/SX-MM850-SC, 220/550 m
856-11951	iMcV-Giga-MediaLinX, TX/LX-SM1310-SC, 15 km
856-11952	iMcV-Giga-MediaLinX, TX/LX-SM1310/PLUS-SC, 40 km
856-11953	iMcV-Giga-MediaLinX, TX/LX-SM1550/LONG-SC, 80 km
856-11958	iMcV-Giga-MediaLinX, TX/LX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
856-11940	iMcV-Giga-MediaLinX, TX/SSLX-SM1310-SC (1310xmt/1550rcv), 10 km
856-11941	iMcV-Giga-MediaLinX, TX/SSLX-SM1550-SC (1550xmt/1310rcv), 10 km
856-11933	iMcV-Giga-MediaLinX, TX/SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
856-11935	iMcV-Giga-MediaLinX, TX/SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
856-11942	iMcV-Giga-MediaLinX, TX/SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
856-11943	iMcV-Giga-MediaLinX, TX/SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
856-11937	iMcV-Giga-MediaLinX, TX/SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 30 km
856-11939	iMcV-Giga-MediaLinX, TX/SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 30 km
856-11954	iMcV-Giga-MediaLinX, TX/SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
856-11955	iMcV-Giga-MediaLinX, TX/SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | LFPT | Config Control

iMcV-T1/E1/J1 and IE-iMcV-T1/E1/J1-LineTerm with Config Control

6-YEAR Comprehensive Warranty



* SFPs Sold Separately

The ideal solution for extending PBX or legacy Telco circuits over fiber optics in the local loop and or long-haul applications.

Product Overview

SNMP-manageable, the iMcV-T1/E1/J1 converter series of modules extend 1.544 Mbps T1/J1 and 2.048 Mbps E1 copper-based PBX, router and switch circuits over regular duplex fiber or single-strand fiber optics. Supporting fiber distances of up to 80 km, the iMcV-T1/E1/J1 series of converters include built-in jitter removal, line integrity testing, diagnostic tools (Loopback mode and Transmit Data Source) and remote management features.

Select from the iMcV-T1/E1/J1, offering standard repeater-like functionality, or the IE-iMcV-T1/E1/J1-LineTerm which incorporates advanced features such as Line Terminating functionality and config control, support for both Alarm Indication Signals (AIS) and Remote Alarm Indications (RAI). Both versions are designed to be installed in pairs.

The IE-iMcV-T1/E1/J1 LineTerm modules are installed as a HOST-REMOTE pair and can be remotely managed when the HOST is installed in an iMediaChassis with an SNMP–Management Module. This enables network managers to conduct loopback testing, to monitor, and to manage units located up to 80 km away.

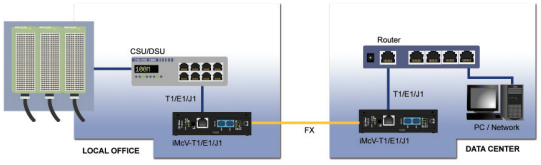
Config Control

Configuration Control

Is available on select models of the IE-iMcV-T1/E1/J1 Line Term and IE-iMcV-T1/E1/J1 TP/SFP. Its main function is to assist the end-user by retaining the latest configuration regardless of how the initial configuration was setup, whether through DIP Switch settings or the SNMP Management Module's configuration.

Application Example

Extend T1/E1/J1 signals up to 80 km over fiber using point to point iMcV-T1/E1/J1 modules. In the example below, PBX traffic from a local office is sent over fiber to a remote data center.



Features

Switch Selectable Protocol
- Operates at (T1/J1 1.544 Mbps) and (E1 2.048 Mbps)

Two versions to choose from:
- Standard version – offers repeater-like functionality
- Line Terminating version – supports "Telco-like" features, including Alarm Indication Signals (AIS) and Remote Alarm Indications (RAI)

Management
- Conduct Loopback tests, monitor/manage units via GUI-based iView2
- Remote unit supports secure, out-of-band management
- Diagnostic LEDs

Offers more fiber choices
- Available for multi-mode or single-mode fiber
- Single-strand fiber versions
- Supports distances up to 80 km

Eases troubleshooting
- Loopback testing modes, plus SNMP management and LEDs, assist in diagnosing problems on fiber optic or copper networks
- Supports fiber and coax remote loopback control
- Transmit Data Source diagnostic tool sends data as unframed all ones, a pattern of alternating ones and zeros, or a Pseudorandom Bit Sequence (PRBS). A built-in PRBS signal detector makes testing even easier.
- LED display for monitoring of line diagnostics

Physical Specifications

Fiber Types Supported
- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-48, ST and SC

Regulatory Approvals:
FCC Class A, UL/cUL, CE, CSA, CB

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Power Rating:
5V

Shipping Weight:
0.30 lbs (0.11 kg)

FREE iVIEW² Device Management Application SNMP Management Software

Ordering Information

* IE-iMcV-T1/E1/J1-LineTerm, With Config Control TP/SFP

850-18100	IE-iMcV-T1/E1/J1-LineTerm, TP/SFP (requires one SFP/155-ED Module required)

iMcV-T1/E1/J1 Repeater Modules

850-14198	iMcV-T1/E1/J1, TP/Fiber-MM850-ST, 2 km
850-14199	iMcV-T1/E1/J1, TP/Fiber-MM850-SC, 2 km
850-14200	iMcV-T1/E1/J1, TP/Fiber-MM1300-ST, 5 km
850-14201	iMcV-T1/E1/J1, TP/Fiber-MM1300-SC, 5 km
850-14202	iMcV-T1/E1/J1, TP/Fiber-SM1310/PLUS-ST, 40 km
850-14203	iMcV-T1/E1/J1, TP/Fiber-SM1310/PLUS-SC, 40 km
850-14204	iMcV-T1/E1/J1, TP/Fiber-SM1310/LONG-ST, 80 km
850-14205	iMcV-T1/E1/J1, TP/Fiber-SM1310/LONG-SC, 80 km
850-14206	iMcV-T1/E1/J1, TP/Fiber-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
850-14288	iMcV-T1/E1/J1, TP/SSFiber-MM1310-SC (1310xmt/1550rcv), 2 km
850-14289	iMcV-T1/E1/J1, TP/SSFiber-MM1550-SC (1550xmt/1310rcv), 2 km
850-14290	iMcV-T1/E1/J1, TP/SSFiber-SM1310-SC (1310xmt/1550rcv), 20 km
850-14291	iMcV-T1/E1/J1, TP/SSFiber-SM1550-SC (1550xmt/1310rcv), 20 km
850-14292	iMcV-T1/E1/J1, TP/SSFiber-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
850-14293	iMcV-T1/E1/J1, TP/SSFiber-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
850-14294	iMcV-T1/E1/J1, TP/SSFiber-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
850-14295	iMcV-T1/E1/J1, TP/SSFiber-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

IE-iMcV-T1/E1/J1 Line Terminating with Config Control Modules NEW!

850-18101	iMcV-T1/E1/J1-LineTerm TP/Fiber-MM850-ST, 2 km
850-18102	iMcV-T1/E1/J1-LineTerm TP/Fiber-MM850-SC, 2 km
850-18103	iMcV-T1/E1/J1-LineTerm TP/Fiber-MM1300-ST, 5 km
850-18104	iMcV-T1/E1/J1-LineTerm TP/Fiber-MM1300-SC, 5 km
850-18105	iMcV-T1/E1/J1-LineTerm TP/Fiber-SM1310/PLUS-ST, 40 km
850-18106	iMcV-T1/E1/J1-LineTerm TP/Fiber-SM1310/PLUS-SC, 40 km
* 850-18107	iMcV-T1/E1/J1-LineTerm TP/Fiber-SM1310/LONG-ST, 80 km
* 850-18108	iMcV-T1/E1/J1-LineTerm TP/Fiber-SM1310/LONG-SC, 80 km
850-18111	iMcV-T1/E1/J1-LineTerm TP/Fiber-SM1550/LONG-ST, 80 km
Single-Strand Fiber	
850-18120	iMcV-T1/E1/J1-LineTerm TP/SSFiber-MM1310-SC (1310xmt/1550rcv), 2 km
850-18121	iMcV-T1/E1/J1-LineTerm TP/SSFiber-MM1550-SC (1550xmt/1310rcv), 2 km
850-18122	iMcV-T1/E1/J1-LineTerm TP/SSFiber-SM1310-SC (1310xmt/1550rcv), 20 km
850-18123	iMcV-T1/E1/J1-LineTerm TP/SSFiber-SM1550-SC (1550xmt/1310rcv), 20 km
850-18124	iMcV-T1/E1/J1-LineTerm TP/SSFiber-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
850-18125	iMcV-T1/E1/J1-LineTerm TP/SSFiber-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
850-18126	iMcV-T1/E1/J1-LineTerm TP/SSFiber-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
850-18127	iMcV-T1/E1/J1-LineTerm TP/SSFiber-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

*Certified at 40 km, 80 km is achievable

CWDM versions available, See website for details

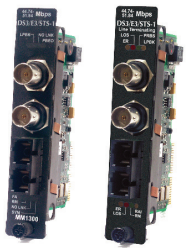
Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss | Config Control

iMcV-DS3/E3/STS

6-YEAR Comprehensive Warranty



Protocol-selectable DS3/E3/STS Coax-to-Fiber media converters extend transmission distances over fiber optics and reduces operational costs with remote end management.

Product Overview

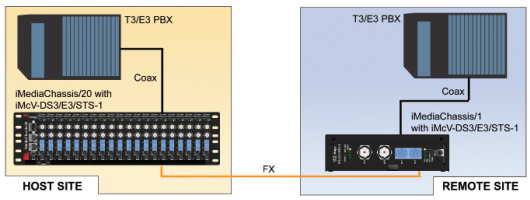
iMcV-DS3/E3/STS converters are perfect for service providers and enterprise campus networks utilizing DS3/E3/STS coaxial circuits. The modules enable users to convert coax media to single-mode fiber and extend the distance of data transmissions over MAN access networks up to 80 km. The modules support premises networking applications to convert the incoming circuit to fiber for distribution into the structured cabling system.

Choose from versions offering repeater-like functionality or Line-Terminating functionality, including standards compliant Alarm Indication Signals (AIS) for signal loss condition propagation.

The iMcV-DS3/E3/STS LineTerm modules are installed as a HOST-REMOTE pair and can be remotely managed when the HOST is installed in an iMediaChassis with an SNMP–Management Module. This enables network managers to conduct loopback testing, to monitor, and to manage units located up to 80 km away. Since B&B Electronics' management technology functions transparently to the user data, real-time, end-to-end management is provided at all times.

Application Example

Extend DS3 signals up to 80 km over fiber optics using iMcV-DS3/E3/STS converters



* For Telco environments, it is not recommended that the iMcV-DS3/E3/STS converters be installed in an IE-MediaChassis/1-DC. The power source in this chassis is not isolated, and cannot support positive reference ground systems typically used in Telco environments. The MediaChassis/2-DC and the iMediaChassis/6-DC are suitable alternatives.

Features

Switch Selectable Protocol

- Operates at 45 Mbps (DS3), 34 Mbps (E3) or 52 Mbps (STS-1)
- Two versions to choose from:
  - » Standard Version - offers repeater-like functionality
  - » Line Terminating Version - supports "Telco" features, including Alarm Indication Signals (AIS)

Management

- Conduct loopback tests, monitor/manage units via GUI-Based iView² or Web Server
- based iView² V.3.0
- Remote unit supports secure, out-of-band management
- Diagnostic LEDs

Supports more fiber choices

- Available for multi-mode or single-mode fiber
- Single-strand fiber versions
- Supports very long fiber distances

Eases Troubleshooting

- Loopback testing modes, plus SNMP management and LEDs, assist in diagnosing problems on fiber optic networks
- Supports fiber and coax remote loopback control
- Internal test-head function for transmitting and detecting PRBS test patterns.
- LED Line Diagnostics
- Supports Far End Fault (FEF)* - (LineTerm version only)

*FEF provides a local LED indication when a fault exists at the equipment at the far end of the optical link.

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
BNC, ST and SC

Regulatory Approvals:
FCC Class B, UL/cUL, CE, CSA, CB

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Power Rating:
5V

Shipping Weight:
0.30 lbs (0.11 kg)

CWDM versions available, See website for details

Ordering Information

iMcV-DS3/E3/STS Repeater Modules

850-14338	iMcV-DS3/E3/STS, BNC/FX-MM850-ST, 2 km
850-14339	iMcV-DS3/E3/STS, BNC/FX-MM850-SC, 2 km
850-14300	iMcV-DS3/E3/STS, BNC/FX-MM1300-ST, 5 km
850-14301	iMcV-DS3/E3/STS, BNC/FX-MM1300-SC, 5 km
850-14302	iMcV-DS3/E3/STS, BNC/FX-SM1310/PLUS-ST, 40 km
850-14303	iMcV-DS3/E3/STS, BNC/FX-SM1310/PLUS-SC, 40 km
850-14304	iMcV-DS3/E3/STS, BNC/FX-SM1310/LONG-ST, 80 km
850-14305	iMcV-DS3/E3/STS, BNC/FX-SM1310/LONG-SC, 80 km
850-14306	iMcV-DS3/E3/STS, BNC/FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
850-14310	iMcV-DS3/E3/STS, BNC/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
850-14311	iMcV-DS3/E3/STS, BNC/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
850-14312	iMcV-DS3/E3/STS, BNC/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
850-14313	iMcV-DS3/E3/STS, BNC/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
850-14314	iMcV-DS3/E3/STS, BNC/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
850-14315	iMcV-DS3/E3/STS, BNC/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

iMcV-DS3/E3/STS Line Term Modules

850-14438	iMcV-DS3/E3/STS-LineTerm, BNC/FX-MM850-ST, 2 km
850-14439	iMcV-DS3/E3/STS-LineTerm, BNC/FX-MM850-SC, 2 km
850-14400	iMcV-DS3/E3/STS-LineTerm, BNC/FX-MM1300-ST, 5 km
850-14401	iMcV-DS3/E3/STS-LineTerm, BNC/FX-MM1300-SC, 5 km
850-14402	iMcV-DS3/E3/STS-LineTerm, BNC/FX-SM1310/PLUS-ST, 40 km
850-14403	iMcV-DS3/E3/STS-LineTerm, BNC/FX-SM1310/PLUS-SC, 40 km
850-14404	iMcV-DS3/E3/STS-LineTerm, BNC/FX-SM1310/LONG-ST, 80 km
850-14405	iMcV-DS3/E3/STS-LineTerm, BNC/FX-SM1310/LONG-SC, 80 km
850-14406	iMcV-DS3/E3/STS-LineTerm, BNC/FX-SM1550/LONG-SC, 80 km
Single-Strand Fiber	
850-14410	iMcV-DS3/E3/STS-LineTerm, BNC/SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
850-14411	iMcV-DS3/E3/STS-LineTerm, BNC/SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
850-14412	iMcV-DS3/E3/STS-LineTerm, BNC/SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
850-14413	iMcV-DS3/E3/STS-LineTerm, BNC/SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
850-14414	iMcV-DS3/E3/STS-LineTerm, BNC/SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
850-14415	iMcV-DS3/E3/STS-LineTerm, BNC/SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss

iMcV-E1-Mux/4+Ethernet (Enhanced)

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

The IE-iMcV-E1-Mux/4 Transports Four E1 Extensions and One RS-232 Serial Link Over a Fiber Optic Line With Optional 1+1 Protection and Full-Bandwidth 10/100 Ethernet Support.

Product Overview

The IE-iMcV-E1-Mux/4 is a managed modular media converter, installed as a Host/Remote pair, that transports four independent E1 lines over a single or dual fiber optic line. The module is ideal for applications requiring TDM extension, such as remote office PABX connectivity, with support for a full bandwidth 10/100BaseT Ethernet connection over the same optical link.

The IE-iMcV-E1-Mux/4 allows for Bandwidth Limiting control in 32 Kbps increments up to 100 Mbps. It also detects Ethernet, AIS, E1 and fiber LOS events as well as degraded lines with full LED indications including a Remote Alarm Indicator (RAI) over the fiber link. E1 ports can also be enabled or disabled via the CLI, Telnet or SNMP management software, allowing the user to perform maintenance on a particular line without affecting others.

Fiber redundancy (1+1) on removable SFP modules offers the enhanced reliability of a protected fiber link while supporting the complete range of optical types and distances. The 1+1 protection system automatically switches to the best fiber line within 50 milliseconds, should one line become impaired or fail.
The module also features an independent serial link (RS-232) which is carried over the same fiber link(s), and can be used for transporting serial traffic from other equipment located at the remote point of presence (POP) back to the central office. This unit also supports an independent RS-232 console port for local monitoring and configuration of the unit by technical support personnel.

Features

- Four independent E1 ports on RJ-48 connectors with surge protection
- AIS generation on signal loss on all E1 and fiber interfaces
- AIS Detection
- Supports local and remote loopback functions
- Dual SFP fiber ports with 1+1 protection switching
- One optional full bandwidth, Ethernet 10/100BaseT port
- User defined bandwidth limiting on Ethernet port
- Auto Negotiation or forced modes on the Ethernet port
- E1 ports can be remotely disabled by user
- Supports Jumbo Ethernet frames to 1916
- Supports "Pause" Frames
- AutoCross MDI/MDI-X on Ethernet port
- Supports the Link Fault Pass-Through Function (LFPT)
- DDMI register retrieval supported on SFP port
- One end-to-end serial RS-232 port to 120 Kbps on an RJ-45 connector
- Both Host/Remote are managed from the Host unit
- Command Line Interface (CLI) management provided via one MiniJack RS-232 console port
- Remote Graphical User Interface (GUI) management through a managed iMediaChassis
- SNMP Alarm TRAP reporting in managed chassis, including Last Gasp
- Full LED diagnostics on front panel
- IE model supports extended temperature

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Physical Specifications

Fiber Types Supported
- SFP

Connectors:
Four E1 (RJ-48) copper ports
Two SFP slots
One RS-232 on MiniJack
One 10/100BaseT on RJ-45
One RS-232 on RJ-45

Regulatory Approvals:
IEEE-802.3u, ITU G.775 (AIS, LOS), GR-820-CORE

Operating Temperature:
-40°F to 158°F (-40°C to +70°C)

Storage Temperature:
-40°F to +160°F (-40° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
Double-wide chassis module

Power Consumption (Typical):
0.96A @ +5 VDC

Shipping Weight:
1.1 lbs (0.50 kg)

Ordering Information

* iMcV-E1-Mux/4+Ethernet (Enhanced) Module (doublewide) NEW!

857-18111 iMcV-E1-Mux/4+Ethernet, SFP (requires one or two SFP/155 Modules), Various

* ** iMcV-E1-Mux/4+Ethernet Module (doublewide)

857-14400 iMcV-E1-Mux/4+Ethernet, SFP (requires one or two SFP/155 Modules), Various

* ** IE-iMcV-E1-Mux/4+Ethernet Module (doublewide)

857-18400 IE-iMcV-E1-Mux/4+Ethernet, SFP (requires one or two SFP/155 Modules), Various

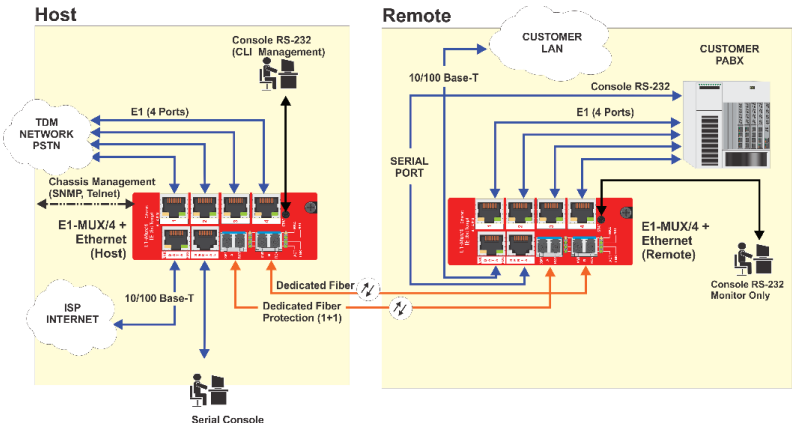
**** For more information call B&B Electronics sales or visit www.imcnetworks.com**

Available Accessories

825-39951 Serial Cable MiniJack to DB9(Female)

Application Example

In a typical application, a Customer PABX is provided with up to four E1 lines from the Public Switch Telephone Network (PSTN) over a protected optical link. In addition, the customer location can receive a full bandwidth, 100BaseT Ethernet connection to the Internet from the local Internet Service Provider (ISP) over the same, protected, optical link. Operation Administration and Management (OAM) functions for the link are provided from the Host location through either a "Console" RS-232 connection on the Host unit or a SNMP connection through the management interface at the Host chassis. In this example, the RS-232 "Console" port of the remote PABX is also carried back to the Host location for remote management of the customer located PABX, using the end-to-end serial RS-232 port on the iMcV-E1-Mux/4.



Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss

IE-iMcV-T1-Mux/4 + Ethernet

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

The IE-iMcV-T1-Mux/4 Transports Four T1 Extensions and One RS-232 Serial Link Over a Fiber Optic Line With Optional 1+1 Protection and Full-Bandwidth 10/100 Ethernet Support.

Product Overview

The IE-iMcV-T1-Mux/4 is a managed modular media converter, installed as a Host/Remote pair, that transports four independent T1 lines over a single or dual fiber optic line. The module is ideal for applications requiring TDM extension, such as remote office PABX connectivity, with support for a full bandwidth 10/100BaseT Ethernet connection over the same optical link.

The iMcV-T1-Mux/4 detects, Ethernet, T1 and fiber LOS events as well as degraded lines with full LED indications including a Remote Alarm Indicator (RAI) over the fiber link.

Fiber redundancy (1+1) on removable SFP modules offers the enhanced reliability of a protected fiber link while supporting the complete range of optical types and distances. The 1+1 protection system automatically switches to the best fiber line within 50 milliseconds, should one line become impaired or fail.

The IE-iMcV-T1-Mux/4 features an independent serial link (RS-232) which is carried over the same fiber link(s), and can be used for transporting serial traffic from other equipment located at the remote point of presence (POP) back to the central office. The unit also supports an independent RS-232 console port for local monitoring and configuration of the unit by technical support personnel.unit also supports an independent RS-232 console port for local monitoring and configuration of the unit by technical support personnel.

Features

- Four independent T1 ports on RJ-48 connectors
- T1 ports can be remotely disabled by user
- AIS generation on signal loss on all T1 and fiber interfaces
- Supports local and remote loopback functions
- One full bandwidth, 10/100BaseT Ethernet port
- Auto Negotiation or forced modes on the Ethernet port
- Supports Jumbo Ethernet frames to 1916
- Supports "Pause" Frames
- User defined bandwidth limiting on Ethernet port
- AutoCross MDI/MDIX on Ethernet port
- Supports the Link Fault Pass-Through Function (LFPT) on the Ethernet port
- Dual SFP fiber ports with 1+1 protection switching
- DDMI register retrieval supported on SFP ports for enhanced OAM
- B8ZS or AMI T1 line code (T1 ports)
- One end-to-end serial RS-232 port to 125 Kbps on an RJ-45 connector
- Both Host/Remote are managed from the Host unit
- Command Line Interface (CLI) management provided via one MiniJack RS-232 console port
- Remote Graphical User Interface (GUI) management through a managed iMediaChassis
- SNMP Alarm TRAP reporting in managed chassis, including Last Gasp
- Full LED diagnostics on front panel

Physical Specifications

Fiber Types Supported
- SFP

Connectors:
Four RJ-48 T1 ports DTE, 120 Ω
Two SFP slots
One RS-232 on MiniJack
One 10/100BaseT on RJ-45
One RS-232 on RJ-45

Regulatory Approvals:
FCC Class B, CE, IEEE-802.3u, ITU-T G.703 (Pulse Shape), ITU-T G.824 (Jitter), ITU-T-G.775 (AIS, LOS)

Operating Temperature:
32° to 160°F (0° to +70°C)

Storage Temperature:
-40° to +160°F (-40° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
Double-wide chassis module

Power Rating:
4.2W Typical 5.5W Max.

Shipping Weight:
1.1 lbs (0.50 kg)

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Ordering Information

* IE-iMcV-T1-Mux/4 + Ethernet Module (double wide)

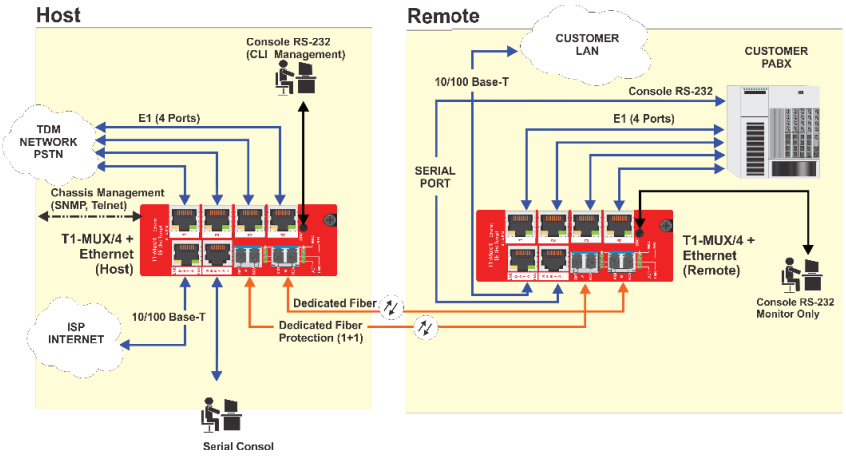
857-18110	IE-iMcV-T1-Mux/4, SFP (requires one or two SFP/155 Module), Various

IE-iMcV-T1-Mux/4 Accessories

825-39951	Serial Cable, MiniJack to DB9 (female)

Application Example

In a typical application, a Customer PABX is provided with up to four E1 lines from the Public Switch Telephone Network (PSTN) In a typical application, a Customer PABX is provided with up to four T1 lines from the Public Switch Telephone Network (PSTN) over a protected optical link. In addition, the customer location can receive a full bandwidth, 100BaseT Ethernet connection to the Internet from the local Internet Service Provider (ISP) over the same, protected, optical link. Operation Administration and Management (OAM) functions for the link are provided from the Host location through either a "Console" RS-232 connection on the Host unit or a SNMP connection through the management interface at the Host chassis. In this example, the RS-232 "Console" port of the remote PABX is also carried back to the Host location for remote management of the customer located PABX, using the end-to-end serial RS-232 port on the IE-iMcV-T1-Mux/4.



Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss

iMcV-Switch Modules

* SFPs Sold Separately

Monitor all connections from a central site with iMcV Series multi-port switch modules.

Product Overview

The iMcV-Switch is a multi-port, 10/100 Ethernet module that allows the user to increase port density and the service area of Ethernet networks. The store and forward switch function allows the end user to extend Ethernet service to locations for a total of 100 meters from the Ethernet source. All RJ-45 ports Auto Negotiate 10/100Base-T, half/full duplex, and automatically configure for MDI or MDIX operation. Each port allows a maximum frame size of up to 1916 bytes and supports Flow Control and priority queuing.

Easily view the status of the iMcV-Switch with B&B Electronics' GUI-based iView². iView² runs standalone on Windows NT/XP/2000/Vista, as a standalone Java Application for other operating systems, as a snap-in module for HP OpenView, as a Web Server running under IIS or as a Java Web Servlet. For assistance in selecting the right version of iView² for your operating system, visit our web site at: http://www.imcnetworks.com/products/iView2installers.cfm

Features

- Multi-port 10/100Base-T MAC switch
- Available with 1 or 2 SFP ports, or 1 SC, ST or single-strand fiber port
- Supports up to 1000 MAC address learning
- Supports standard MAC address aging
- Transparent to VLAN tags
- Grants priority for all frames with PRI>4 or DSCP>32
- Supports Auto Cross and Auto Negotiation on all Tx ports
- Supports Flow Control
- Features Collision Detection

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
RJ-45 and SC, ST, LC or SFP

Regulatory Approvals:
FCC Class B, UL/cUL, CE

Operating Temperature:
+32° to +122° F (0° to +50° C)

Storage Temperature:
-4° to +158° F (-20° to +70° C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:
0.30 lbs (0.11 kg)

Ordering Information

* iMcV-Switch

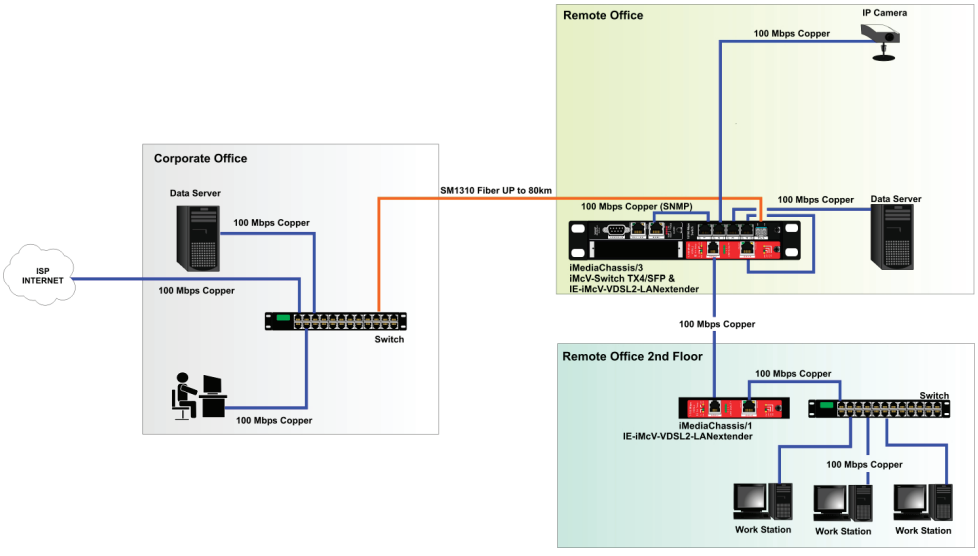
852-14440	iMcV-Switch, TX/5, 100 m
852-14441	iMcV-Switch, TX/4 + SFP (requires one SFP/155 module),
852-14442	iMcV-Switch, TX/3 + 2SFP (requires SFP/155 module(s))
852-14443	iMcV-Switch, TX/3 + FX-MM850-ST, 2 km
852-14444	iMcV-Switch, TX/3 + FX-MM850-SC, 2 km
852-14445	iMcV-Switch, TX/3 + FX-MM1300-ST, 5 km
852-14446	iMcV-Switch, TX/3 + FX-MM1300-SC, 5 km
852-14449	iMcV-Switch, TX/3 + FX-SM1310/PLUS-ST, 40 km
852-14450	iMcV-Switch, TX/3 + FX-SM1310/PLUS-SC, 40 km
852-14451	iMcV-Switch, TX/3 + FX-SM1310/LONG-ST, 80 km
852-14452	iMcV-Switch, TX/3 + FX-SM1310/LONG-SC, 80 km
852-14453	iMcV-Switch, TX/3 + FX-SM1550/LONG-SC, 80 km
852-14454	iMcV-Switch, TX/3 + FX-SM1550/XLONG-SC, 100 km
Single-Strand Fiber	
852-14470	iMcV-Switch, TX/3 + SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
852-14471	iMcV-Switch, TX/3 + SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
852-14472	iMcV-Switch, TX/3 + SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
852-14473	iMcV-Switch, TX/3 + SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
852-14474	iMcV-Switch, TX/3 + SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
852-14475	iMcV-Switch, TX/3 + SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Application Example

The iMcV-Switch allows the user to increase port density and service area of Ethernet networks when installed in an iMediaChassis or MediaChassis. In this example, the iMediaChassis/3-2AC already has an iMcV-VDSL2-LANextender that provides VDSL connectivity while using existing telephone cabling between destinations such as different floors in the same building over a 100 meter range. With the addition of the iMcV-Switch TX/4 + SFP, one now has five more ports, four copper and one fiber, to accommodate varying applications such as UDP video broadcast, data transmission, data access/archiving and SNMP that can be transmitted at a distance via fiber.



Auto Negotiation | Managed | Auto Cross

IE-iMcV-MultiWay

6-YEAR Comprehensive Warranty

NEW!

* SFPs Sold Separately

A Compact, Versatile, SNMP Manageable Gigabit Ethernet Device That Offers internal and redundant powering options.

Product Overview

The IE-iMcV-MultiWay is a modular, CPE device providing two fixed 10/100/1000Base-T copper ports and 2 SFP ports. The SFP ports support fiber or copper SFPs. A console port and on-board DIP Switches provide configuration and mode options for the module. The IE-iMcV-MultiWay provides OAM functionality with 802.3ah and 802.1ag support on each port. As an Industrial Ethernet device, it supports an extended temperature range of -40° to +85° C.

There are four distinct DIP Switch selectable configurations that the IE-MultiWay supports. Among them are a 1+1 Uplink Protection Switch, a 4-Port Gigabit Switch, and a Dual Copper to Fiber SFP Media/Mode Converter (two gigabit fiber media converters in one).

As a 4-port device, it can be deployed with fiber redundancy (with or without 1+1 uplink protection) and status monitoring with management on all ports via SNMP, which offers OAM for mission-critical applications. It can also be installed as dual 10/100/1000 Mbps copper to fiber media converter and be utilized as two separate converters.

The IE-iMcV-MultiWay supports 10/100/1000 Mbps and 1 Gbps copper and 100 Mbps and 1 Gbps optical SFP modules, to provide greater flexibility in the network environment. The hot-swappable nature of SFPs and the numerous fiber modes and types that are available allow for easy configuration and future upgrading as network demands evolve.

The IE-iMcV-MultiWay offers a full feature set including Auto Negotiation, Selective Advertising, AutoCross (on copper ports), VLANs, loopback testing and OAM. Software updates can be downloaded through TFTP or iView2 (iConfig view).

Features

Flexible Solution

- Copper to fiber SFP media converter
- Dual-independent copper to fiber SFP media converter(s)
- Fiber repeater
- SFP to SFP mode converter with copper drops (Re-amplify, Re-shape, Re-time)
- 4-Port Gigabit Switch
- 1+1 uplink protection (<50 mSec)
- Supports per port service VLAN
- Supports daisy chain expansion
- Supports RMON Statistics
- Supports Jumbo Frames (up to 10240 bytes)
- Modular form factor

Advanced Remote Monitoring/Management

- Supports IEEE 802.3ah OAM (active/passive), and 802.1ag CFM (Connectivity Fault Management) and Y.1731 on all ports
- Discovery, Link Monitoring, Performance Monitoring and Remote Loopback
- Bandwidth Limiting with burst capability and priority queuing
- Rate Limiting can be done at Layer 1, 2 or 3
- Via UMA, can act as a Remote when connected to a Host iMcV-Giga-FiberLinX-II
- Generates SNMP TRAPs based on events
- RS-232 CLI (Command Line Interface) console port

SFP Support

- Auto negotiate speed and flow control for 10/100/1000 copper SFPs with SGMII
- Supports fixed speed 1 Gbps full-duplex copper SFPs
- Auto detect for 100 or 1000 optical SFPs

"Industrial Ethernet" (IE) Features

- Extended temperature functionality, up to -40° to +85° C
- Powering options include redundant internal AC powered chassis

Physical Specifications

Fiber Types Supported

- SFP

Connectors:

RJ-45, 2 SFP

Regulatory Approvals:

• FCC Class A

• UL, cUL, CE

Operating Temperature:

-40° F to +185° F (-40° C to +85° C)

Storage Temperature:

-67 F to +257° F (-55° C to +125° C)

Humidity:

5 to 95% (non-condensing)

Altitude:

0 to 10,000 ft.

Dimensions

4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:

0.30 lbs (.11 kg)

Also available in a compact Stand-alone version.
See page 4 for details

Ordering Information

*** IE-iMcV-MultiWay**

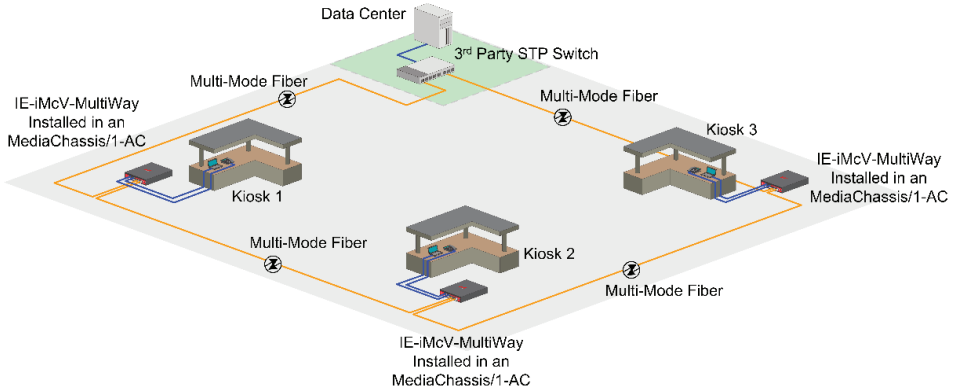
858-18121 IE-iMcV-MultiWay Module, 2TX/2SFP, Various

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Application Example

In the following example, three separate IE-iMcV-MultiWay's installed in single-slot AC chassis are connecting multiple kiosk's in a ring-type network utilizing a Spanning Tree enabled switch. The ring topology provides redundancy to the network. If a fiber break were to occur somewhere along any segment, the spanning tree protocol provides an automatic backup link.



Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss

iMcV-PSE-MidSpan

6-YEAR Comprehensive Warranty

IEEE 802.3af (PoE) compatible, the iMcV-PSE-MidSpan power injector offers unparalleled installation flexibility and cost-savings.

Product Overview

Connecting and powering small devices at the edge of a wired network infrastructure becomes increasingly important to LANs/MANs as they add Wi-Fi access points, webcams, entry control systems and other IP devices. Sometimes, the most optimal location for one of these devices is too far from an AC or DC power source.

IMC Networks' iMcV-PSE-MidSpan provides an important and cost-effective solution. The PSE-MidSpan delivers data and power to Ethernet devices over a single Ethernet cable, using Power over Ethernet (PoE), compliant with IEEE 802.3af. It removes the burden of needing a nearby power outlet and affords greater network flexibility.

The iMcV-PSE-MidSpan can be installed in a multi-port, managed B&B Electronics iMediaChassis chassis, when SNMP management is required. The module's compact size is also ideal for installation in a single slot chassis, when space is a consideration and management is not required.

Features

The most cost-effective power injector solution available today

- Provides power to remote network devices
- Quality product Made in America
- Supports Class 1, 2, and 3 powered devices
- Compliant with IEEE 802.3af (Power over Ethernet)

Low Installation Cost

- Avoid separate power and data cable infrastructure and costly AC outlets
- Simple installation means the IT department can do the job - no electrical permits required

Physical Specifications

Fiber Types Supported

- None

Connectors:

RJ-45

Regulatory Approvals:

FCC Class B, CE

Operating Temperature:

+32° to +122°F (0° to +50°C)

Storage Temperature:

-13° to +158°F (-25° to +70°C)

Humidity:

5 to 95% (non-condensing)

Altitude:

0 to 10,000 ft.

Dimensions

4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Power Rating:

3.2A@5V DC Maximum

PoE Output 4, 7 or 15W

Shipping Weight:

0.30 lbs (0.11 kg)

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Ordering Information

iMcV-PSE-MidSpan Module

857-14910 iMcV-PSE-MidSpan, 100 m

Use with Chassis Platform

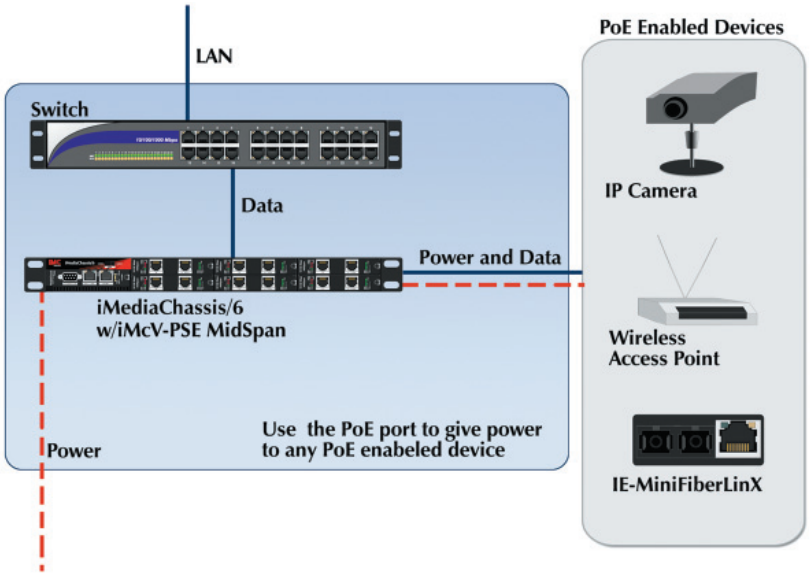
iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

*** Chassis Restrictions:**
A 20-slot iMediaChassis supports up to 11 PSE-MidSpans (with AC power) or 9 PSE-MidSpans (with DC power). This applies only to the 20-slot chassis.

For more information contact B&B Electronics sales.

Application Example

The iMcV-PSE-Midspan is ideal for delivering PoE to remote network devices, from a compact rackmountable chassis.



Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss

IE-iMcV-VDSL2-LANextender

6-YEAR Comprehensive Warranty

Extend Ethernet services to remote locations or between buildings with Ethernet over Second Generation VDSL.

Product Overview

VDSL Ethernet LAN extenders enable LAN and campus network managers and service providers to use an existing phone-grade wiring plant to extend 10 Mbps and 100 Mbps Ethernet twisted pair interfaces by using Ethernet over VDSL; the 100 meter distance limitation of twisted pair data cabling is no longer a challenge.

Designed with Second Generation VDSL (Very high-bit-rate Digital Subscriber Line) technology, the IE-iMcV-VDSL2-LANextender allows the transmission of data over sub-standard CAT3 and other telephone cabling to achieve higher data rates than comparable VDSL converters at short distances (less than 100 meters), while supporting asymmetrical data rates on substantially longer lines (greater than 2 km).

IE-iMcV-VDSL2-LANextender module includes:

- One VDSL port with an RJ-11 connector
- One 10/100 twisted pair Ethernet port with a RJ-45 connector
- Auto MDI/MDIX, Auto Negotiation and Selective Advertising with Flow Control on the 10/100 port

Features

Flexible Solution

- Media and protocol converter - converts 10/100BaseT to VDSL
- Operates over existing CAT3 or other telephone cabling
- Supports VDSL2 for Band Plan 997/998, symmetrical and asymmetrical transmission per ITU-T G.993.2 standard

Easy to configure and manage with GUI-based iView²

- Automatically adjusts to reach best bandwidth performance for the physical line in use
- Monitor and control all connections
- Displays maximum VDSL bandwidth
- User selectable Trap on VDSL bandwidth level

Eases Troubleshooting

- Link Quality LED displays maximum supported bandwidth
- Overflow LED to display congestion on the VDSL line

Physical Specifications

Fiber Types Supported

- N/A

Connectors:

RJ-45 and RJ-11

Regulatory Approvals:

FCC Class B, UL/cUL, CSA, CE

Operating Temperature:

-40° F to 185° F (-40° C to +85° C)

Storage Temperature:

-67° to 257°F (-55° to +125°C)

Humidity:

5 to 95% (non-condensing)

Altitude:

0 to 10,000 ft.

Dimensions

4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:

0.30 lbs (0.11 kg)

Ordering Information

IE-iMcV-VDSL2 LANextender

851-18200 IE-iMcV-VDSL2-LANextender, Refer to Matrix

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

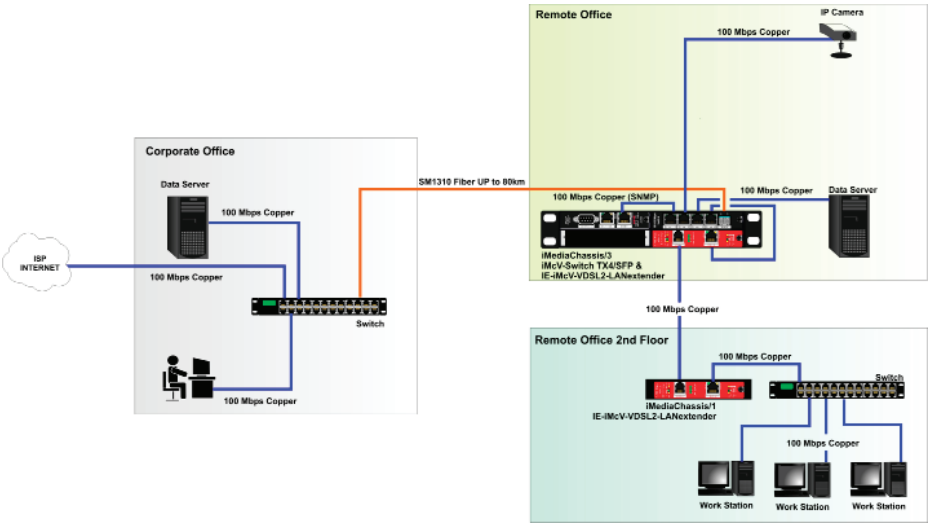
Distance	Upstream Data Rate*	Downstream Data Rate*	Upstream Data Rate*	Downstream Data Rate*
	Asymmetrical		Symmetrical	
300 ft.	58 Mbps	100 Mbps	84 Mbps	98 Mbps
1,000 ft.	43 Mbps	85 Mbps	61 Mbps	63 Mbps
2,000 ft.	14 Mbps	50 Mbps	25 Mbps	37 Mbps
5,000 ft.	0.3 Mbps	16 Mbps	0.3 Mbps	16 Mbps

* Distances and speeds are approximate; actual distances depend on wiring quality and gauge. The distances are less than or equal to the values listed.

* The actual Ethernet speeds are lower than the speeds listed above due to VDSL overhead.

Application Example

In this application the IE-iMcV-VDSL2-LANextender provides data transmission using existing phone-grade wiring such as sub-standard CAT3 or other telephone cabling at a distance greater than 100 m when fiber is either too expensive or unavailable. By utilizing existing cabling to transmit data between floors and with the unit's built-in auto adjusting link quality (throughput), and improved fault isolation with Remote Alarm Indicator, Flow Control, and Link Fault Pass-Through, the unit ensures the connection is maintained as well as the ability to quickly troubleshoot when problems do arise.



Auto Negotiation | Managed | Auto Cross

iMcV-Fiber Mode Converters (iMcV-S2MM, M2MM, S2SM)

6-YEAR Comprehensive Warranty

The industry's first protocol-independent fiber mode conversion modules convert between dissimilar fiber modes and wavelengths.

Product Overview

The iMcV-S2MM series of fiber mode converters allows easy network extension to remote locations by converting to single-mode fiber— without having to replace existing multi-mode fiber equipment.

Protocol-independent operation means the S2MM series gets the job done: from Ethernet to Fast Ethernet and ATM/OC-3 choose the S2MM/155 series; for OC-12, Gigabit Ethernet and Fibre Channel, choose the S2MM/1250 series. This series also includes multi-mode to multi-mode (M2MM) and single-mode to long-haul single-mode (S2SM) converters for specialty data networking applications.

The iMcV Fiber Mode Converter series is SNMP-manageable to aid in network troubleshooting with modular architecture for flexibility. This series is available with single-strand fiber technology, transmitting two-channel, full duplex data on just one strand of fiber.

Features

- Includes protocol-independent operation
- Converts between dissimilar fiber modes and wavelengths

Three Types of Mode Conversions:

- Single-mode to Multi-mode (S2MM)
- Single-mode to Single-mode (S2SM)
- Multi-mode to Multi-mode (M2MM)

Two Categories of Transmission Speeds:

- /155: Ethernet, Fast Ethernet and ATM/OC-3
- /1250: OC-12, Gigabit Ethernet and Fibre Channel

Physical Specifications

Fiber Types Supported

- 50/125µm or 62.5/125µm multi-mode fiber
- 9/125µm single-mode fiber
- Available for single-strand fiber

Connectors:
ST, SC, LC

Regulatory Approvals:
FCC Class B, CE

Operating Temperature:
+32° to +122°F (0° to +50°C)

Storage Temperature:
-13° to +158°F (-25° to +70°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

Dimensions
4.19"H x 0.78"W x 2.75"D (10.74 x 2 x 7.05 cm)

Shipping Weight:
0.30 lbs (0.11 kg)

Ordering Information

iMcV-S2MM/155 (Single-mode to Multi-mode)

850-14520	iMcV-S2MM/155, SM1310/PLUS-ST + MM1300-ST, 40 km + 5 km
850-14530	iMcV-S2MM/155, SM1310/PLUS-SC + MM1300-SC, 40 km + 5 km
850-14540	iMcV-S2MM/155, SM1310/LONG-ST + MM1300-ST, 40 km + 5 km
850-14550	iMcV-S2MM/155, SM1310/LONG-SC + MM1300-SC, 40 km + 5 km
850-14555	iMcV-S2MM/155, SM1550/LONG-SC + MM1300-SC, 80 km + 5 km
850-14560	iMcV-S2MM/155, SM1310/PLUS-ST + MM850-ST, 40 km + 2 km
850-14570	iMcV-S2MM/155, SM1310/PLUS-SC + MM850-SC, 40 km + 2 km
850-14580	iMcV-S2MM/155, SM1310/LONG-ST + MM850-ST, 40 km + 2 km
850-14590	iMcV-S2MM/155, SM1310/LONG-SC + MM850-SC, 40 km + 2 km
850-14595	iMcV-S2MM/155, SM1550/LONG-SC + MM850-SC, 80 km + 2 km
Single-Strand Fiber	
850-14532	iMcV-S2MM/155, SSFX-SM1310-SC (1310xmt/1550rcv) + MM1300-SC, 20 km + 5 km
850-14533	iMcV-S2MM/155, SSFX-SM1550-SC (1550xmt/1310rcv) + MM1300-SC , 20 km + 5 km
850-14535	iMcV-S2MM/155, SSFX-SM1310/PLUS-SC (1310xmt/1550rcv) + MM1300-SC , 40 km + 5 km
850-14536	iMcV-S2MM/155, SSFX-SM1550/PLUS-SC (1550xmt/1310rcv) + MM1300-SC , 40 km + 5 km

iMcV-S2MM/1250 (Single-mode to Multi-mode)

859-14799	iMcV-S2MM/1250, LX-SM1310-SC + SX-MM850-SC, 15 km + 220/550 m
859-14800	iMcV-S2MM/1250, LX-SM1310/PLUS-SC + SX-MM850-SC, 40 km + 220/550 m
859-14801	iMcV-S2MM/1250, LX-SM1550/LONG-SC + SX-MM850-SC, 80 km + 220/550 m
Single-Strand Fiber	
859-14806	iMcV-S2MM/1250, SSLX-SM1310-SC (1310xmt/1550rcv) + SX-MM850-SC, 15 km + 220/550 m
859-14807	iMcV-S2MM/1250, SSLX-SM1550-SC (1550xmt/1310rcv) + SX-MM850-SC, 15 km + 220/550 m
859-14808	iMcV-S2MM/1250, SSLX-SM1310/PLUS-SC (1310xmt/1550rcv) + SX-MM850-SC, 40 km + 220/550 m
859-14809	iMcV-S2MM/1250, SSLX-SM1550/PLUS-SC (1550xmt/1310rcv) + SX-MM850-SC, 40 km + 220/550 m

iMcV-S2SM (Single-mode to Single-mode)

850-14519	iMcV-S2SM/155, SM1310/PLUS-SC + SM1310/PLUS-SC, 40 km + 40 km
850-14505	iMcV-S2SM/155, SM1310/LONG-SC + SM1310/LONG-SC, 40 km + 40 km
850-14513	iMcV-S2SM/155, SM1550/LONG-SC + SM1310/PLUS-SC, 80 km + 40 km
850-14514-LC	iMcV-S2SM/155, SM1550/LONG-SC + SM1310/LONG-LC, 80 km + 40 km
Single-Strand Fiber	
850-14515	iMcV-S2SM/155, SSFX-SM1310-SC (1310xmt/1550rcv) + SM1310/PLUS-SC, 20 km + 40 km
850-14516	iMcV-S2SM/155, SSFX-SM1550-SC (1550xmt/1310rcv) + SM1310/PLUS-SC, 20 km + 40 km
850-14517	iMcV-S2SM/155, SSFX-SM1310/PLUS-SC (1310xmt/1550rcv) + SM1310/LONG-SC, 40 km + 80 km
850-14518	iMcV-S2SM/155, SSFX-SM1550/PLUS-SC (1550xmt/1310rcv) + SM1310/LONG-SC, 40 km + 80 km

iMcV-S2SM/1250 (Single-mode to Single mode)

859-14803	iMcV-S2SM/1250, LX-SM1310/PLUS-SC + LX-SM1310/PLUS-SC, 40 km + 40 km
859-14804	iMcV-S2SM/1250, LX-SM1310/PLUS-SC + LX-SM1550/LONG-SC, 40 km + 80 km
Single-Strand Fiber	
859-14820	iMcV-S2SM/1250, SSLX-SM1310-SC (1310xmt/1550rcv) + LX-SM1310/PLUS-SC, 15 km + 40 km
859-14821	iMcV-S2SM/1250, SSLX-SM1550-SC (1550xmt/1310rcv) + LX-SM1310/PLUS-SC, 15 km + 40 km
859-14822	iMcV-S2SM/1250, SSLX-SM1310/PLUS-SC (1310xmt/1550rcv) + LX-SM1310/PLUS-SC, 40 km + 40 km
859-14823	iMcV-S2SM/1250, SSLX-SM1550/PLUS-SC (1550xmt/1310rcv) + LX-SM1310/PLUS-SC, 40 km + 40 km

iMcV-M2MM/155 (Multi-mode to Multi-mode)

850-14510	iMcV-M2MM/155, MM1300-ST + MM850-ST, 5 km + 2 km
850-14511	iMcV-M2MM/155, MM1300-SC + MM850-SC, 5 km + 2 km

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Auto Negotiation | Managed | Auto Cross | Fiber Alert | Link Loss

IE-ModeConverter SFP/SFP

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

Connect network segments running different fiber types using interchangeable SFP modules.

Product Overview

Mode converters allow network operators to incorporate multiple fiber types within a network. The IE-ModeConverter provides the ability to accomplish this by working with existing equipment and thus, eliminating replacement costs. By converting between single-mode and multi-mode fiber, one can easily extend network range to reach more remote locations. Additionally, since the IE-ModeConverter is an Industrial Ethernet device (IE), the unit operates in environments that demand extended operating temperatures.

The IE-ModeConverter uses SFP modules to provide greater fiber flexibility in the network environment. The hot-swappable nature of the SFPs and the numerous fiber modes and types available in SFPs allow for easy configuration and future upgrading as network demands evolve.

The IE-ModeConverter requires two fiber optic SFP modules to operate. The SFP modules must be MSA compliant and support the same speed range. The IE-ModeConverter operates as a mode converter only and not as a rate converter.

Features

Cost-effective and flexible

- Interchangeable SFP modules allow for multiple fiber mode/type conversion options (single mode, multi-mode, long haul, short haul, etc.)
- Extended operating temperatures
- Multiple mounting options (desktop, DIN rail, IE-PowerTray/18-AC (for high density installations))
- Compact size conserves space
- AC or DC powering options
- Ideal for use with B&B Electronics' SFPs

Protocol-Independent

- Supports a full range of SFP Modules offering various transmission speeds, from 10 Mbps to 2.4 Gbps
- Supports OC3, OC12, OC48

Maximizes network uptime

- SFP Modules are hot-swappable; no need to power-down chassis when upgrading or trouble-shooting a single module

Physical Specifications

Fiber Types Supported
SFP

Connectors:
SFP Slots

Regulatory Approvals:
FCC Class B, UL/cUL, CSA, CE, CB

Operating Temperature:
-13° to +185°F(-25° to +85°C) DC Configuration
-4° to 158°F(-20° to +70°C) W/IE-Power 5V
+14° to +122°F(-10° to +50°C) W/AC Wall Adapter

Storage Temperature:
-49° to +185°F (-45° to +85°C)

Humidity:
5 to 95% (non-condensing)

Altitude:
0 to 10,000 ft.

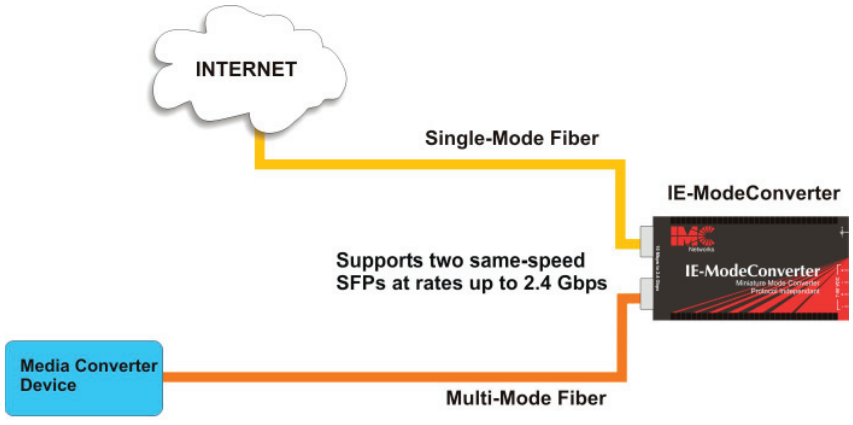
Dimensions
0.83"H x 1.80"W x 3.35"D (2.11 x 4.57 x 8.51 cm)

Power Rating:
AC Wall Adapter: 100-240V AC input, 5V DC output @ 10W, 2.0A
DC Input Voltage: 7 to 50V DC @ 2.5W Chassis grounded to negative terminal
Maximum 3.3W of combined power to both SFPs

Shipping Weight:
0.25 lbs (0.11 kg)

Application Examples

In this example, the IE-ModeConverter converts a local multi-mode fiber signal to a single-mode fiber signal to integrate into an area of the network that supports this type of fiber. The IE-ModeConverter has been equipped with a multi-mode fiber SFP and a single-mode fiber SFP.


INTERNET
Single-Mode Fiber
IE-ModeConverter
IE-ModeConverter
Supports two same-speed SFPs at rates up to 2.4 Gbps
Media Converter Device
Multi-Mode Fiber
The IE-ModeConverter supports any combination of two multi-mode or single mode SFPs

Ordering Information

*** IE-ModeConverter SFP/SFP with AC Adapter**

855-19619 IE-ModeConverter, SFP/SFP

*** IE-ModeConverter SFP/SFP without AC Adapter**

854-19619 IE-ModeConverter, SFP/SFP

Available Accessories & IE-PowerTray/18 Chassis

See Page 12

Auto Negotiation | Auto Cross | Industrial Ethernet

IE-iMcV-ModeConverter SFP/SFP

6-YEAR Comprehensive Warranty

* SFPs Sold Separately

Connect network segments running different fiber types using B&B Electronics' interchangeable SFP modules.

Product Overview

The IE-iMcV-ModeConverter is an SNMP manageable module that allows network operators to incorporate multiple fiber types and wavelengths within a network. It installs in the modular, SNMP-manageable iMediaChassis series and in the unmanaged MediaChassis series.

The IE-iMcV-ModeConverters are protocol-independent with dual SFP ports which can provide a single conversion between different wavelengths or single-mode and multimode fiber, single-mode to single-mode fiber or multimode to single-strand single-mode fiber. The IE-iMcVModeConverter modules support a variety of user configurable features such as LinkLoss and variable speed SFPs. Additionally, since the IE-iMcV-ModeConverter is an Industrial Equipment (IE) device, the unit operates in environments that demand extended operating temperatures.

The IE-iMcV-ModeConverter uses MSA Compliant SFP modules to provide greater fiber flexibility in the network environment. The hot-swappable nature of SFPs and the numerous fiber modes and types that are available allow for easy configuration and future upgrading as network demands evolve.

Features

Cost-effective and flexible

- Interchangeable SFP modules allow for multiple fiber mode/type conversion options (single-mode, multi-mode, single-strand, long haul, short haul, etc.)
- Extended operating temperatures
- DDMI enabled SFPs support SNMP when installed in a compatible managed chassis
- Modular, hot-swappable architecture reduces operational costs associated with product installation, upgrades and maintenance
- Ideal for use with B&B Electronics' SFPs

Protocol-Independent

- Supports a full range of SFP modules offering various transmission speeds, from 10 Mbps up to 2.4 Gbps*

Maximizes network uptime

- Modules are hot-swappable; no need to power-down chassis when upgrading or trouble-shooting a single module
- User selectable FX LinkLoss enables the operator to identify a cable fault/failure to isolate the fault to the specific fiber that has failed

Physical Specifications

Fiber Types Supported

- SFP

Connectors:

SFP Slots

Regulatory Approvals:

FCC Class A, UL/cUL, CE

Operating Temperature:

-40° to +185° F (-40° to +85° C)

Storage Temperature:

-40° to +185° F (-40° to +85° C)

Humidity:

5 to 95% (non-condensing)

Altitude:

0 to 10,000 ft.

Dimensions

4.19" x 0.78" x 2.75" (10.6 cm x 1.98 cm x 6.99 cm)

Power Rating:

Maximum 3.3W of combined power to both SFPs

Shipping Weight:

0.25 lbs (0.11 kg)

Ordering Information

*** IE-iMcV-ModeConverter SFP/SFP**

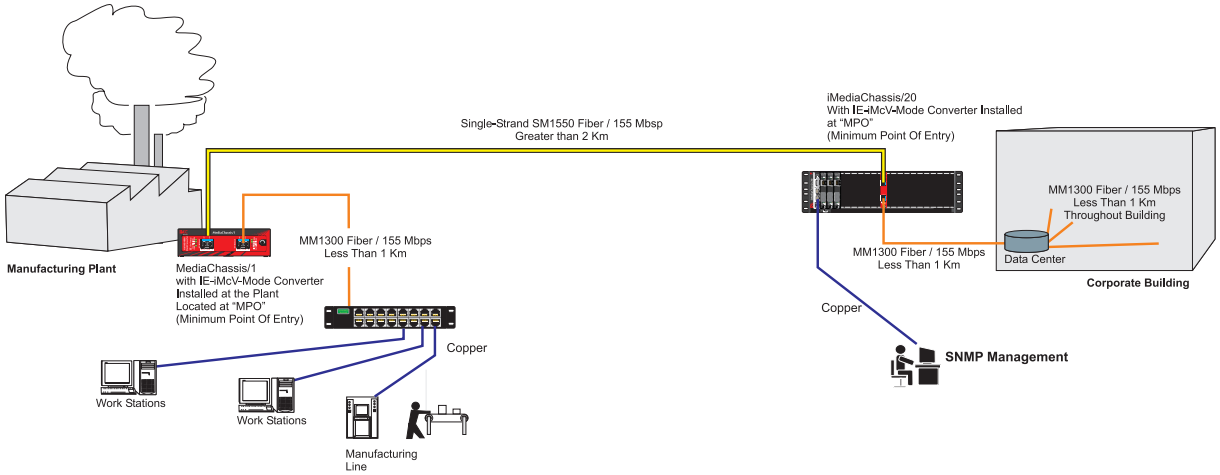
850-19500 IE-iMcV-ModeConverter, SFP/SFP

Use with Chassis Platform

iMediaChassis Series, See Page 45
MediaChassis Series, See Page 46
IE-MediaChassis Series, See Page 46

Application Examples

In this example, both single-mode and multi-mode fiber are deployed with the IE-iMcV-ModeConverter conveniently and seamlessly located at the origin and destination. The extended temperature range is ideal for the manufacturing location, housed in the unmanaged MediaChassis/1 converting between single-mode and multi-mode fiber for transmission at a distance to another IE-iMcV-ModeConverter, housed in a SNMP-managed iMediachassis/20 along with other modules.



Auto Negotiation · Auto Cross · Industrial Ethernet

IE-SFP 100 to 155 Mbps (OC-3) Modules

Operating temperature:
-40°C to +85°C (-40° F to +185° F)
155 Mbps Ethernet SFP Modules
1.25 Gbps Ethernet SFP Modules
2.4 Gbps Ethernet SFP Modules

Copper
Operating temperature:
0°C to +85°C (+32° F to +185° F)
10/100/1000 Mbps SFP Modules
1000 Mbps SFP Modules

Plug in more fiber types and maximize network hardware.

Product Overview

The use of IE-SFP modules makes changing fiber requirements within the locations of the network environment easy. IE-SFPs offer the flexibility of choosing fiber types, and also provide diagnostic information to assist the end user in the identification and troubleshooting of the pluggable modules.

All IE-SFPs are compliant with the Multi-Source Agreement (MSA), ensuring compatibility with a wide range of networking equipment.

All products are made in the USA except SFP products.

Features

Fiber or copper versions available

All SFP Modules

- Multi-source package with Duplex LC connector
- Eye Safety designed to meet Laser Class 1 compliance with IEC 60825-1
- Compliant with ITU-T-G.957, G.958, IEEE 802.3u and 802.3z
- Single +3.3V power supply
- Hot-pluggable
- Complies with Telcordia GR-468-CORE
- All SFP modules report standard information such as:
  - » SFP Type
  - » Fiber Link Length
  - » Wavelength
  - » Bit Rate
  - » Date Code
  - » Serial Number

Extended Diagnostics (DDMI)

- Complying with SFF-8472, IE-SFP modules that include Extended Diagnostics also report information such as:
  - » Temperature
  - » Voltage
  - » Bias Current
  - » TX Power
  - » RX Power

Ordering Information

With DDMI

IE-SFP/155-ED

808-38101	IE-SFP/155-ED, MM850-LC, 2 km
808-38102	IE-SFP/155-ED, MM1300-LC, 2 km
808-38103	IE-SFP/155-ED, SM1310-LC, 20 km
808-38104	IE-SFP/155-ED, SM1310/PLUS-LC, 40 km
808-38105	IE-SFP/155-ED, SM1550/LONG-LC, 80 km
Single-Strand Fiber	
808-38121	IE-SFP/155-ED, SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
808-38122	IE-SFP/155-ED, SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
808-38123	IE-SFP/155-ED, SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
808-38124	IE-SFP/155-ED, SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
808-38125	IE-SFP/155-ED, SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
808-38126	IE-SFP/155-ED, SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km
808-38127	IE-SFP/155-ED, SSFX-SM1490/XLONG-SC (1490xmt/1550rcv), 80 km
808-38128	IE-SFP/155-ED, SSFX-SM1550/XLONG-SC (1550xmt/1490rcv), 80 km

With LC Connector

808-38521	IE-SFP/155-ED, SSFX-SM1310-LC (1310xmt/1550rcv), 20 km
808-38522	IE-SFP/155-ED, SSFX-SM1550-LC (1550xmt/1310rcv), 20 km
808-38523	IE-SFP/155-ED, SSFX-SM1310/PLUS-LC (1310xmt/1550rcv), 40 km
808-38524	IE-SFP/155-ED, SSFX-SM1550/PLUS-LC (1550xmt/1310rcv), 40 km
808-38529	IE-SFP/155-ED, SSFX-SM1310/LONG-LC (1310xmt/1550rcv), 60 km
808-38530	IE-SFP/155-ED, SSFX-SM1550/LONG-LC (1550xmt/1310rcv), 60 km
808-38527	IE-SFP/155-ED, SSFX-SM1490/XLONG-LC (1490xmt/1550rcv), 80 km
808-38528	IE-SFP/155-ED, SSFX-SM1550/XLONG-LC (1550xmt/1490rcv), 80 km

Copper (Twisted Pair) Modules

	Cisco Compatible	
808-39001	808-39001CC	SFP/10-1250, TX, 100 m
808-39010	808-39010CC	SFP/1250, TX, 100 m

Without DDMI

IE-SFP/155

808-38111	IE-SFP/155, MM850-LC, 2 km
808-38112	IE-SFP/155, MM1300-LC, 2 km
808-38113	IE-SFP/155, SM1310-LC, 20 km
808-38114	IE-SFP/155, SM1310/PLUS- LC, 40 km
808-38115	IE-SFP/155, SM1550/LONG-LC, 80 km
Single-Strand Fiber	
808-38131	IE-SFP/155, SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
808-38132	IE-SFP/155, SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
808-38133	IE-SFP/155, SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
808-38134	IE-SFP/155, SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
808-38135	IE-SFP/155, SSFX-SM1310/LONG-SC (1310xmt/1550rcv), 60 km
808-38136	IE-SFP/155, SSFX-SM1550/LONG-SC (1550xmt/1310rcv), 60 km
808-38137	IE-SFP/155, SSFX-SM1490/XLONG-SC (1490xmt/1550rcv), 80 km
808-38138	IE-SFP/155, SSFX-SM1550/XLONG-SC (1550xmt/1490rcv), 80 km

With LC Connector

808-38531	IE-SFP/155, SSFX-SM1310-LC (1310xmt/1550rcv), 20 km
808-38532	IE-SFP/155, SSFX-SM1550-LC (1550xmt/1310rcv), 20 km
808-38533	IE-SFP/155, SSFX-SM1310/PLUS-LC (1310xmt/1550rcv), 40 km
808-38534	IE-SFP/155, SSFX-SM1550/PLUS-LC (1550xmt/1310rcv), 40 km
808-38539	IE-SFP/155, SSFX-SM1310/LONG-LC (1310xmt/1550rcv), 60 km
808-38540	IE-SFP/155, SSFX-SM1550/LONG-LC (1550xmt/1310rcv), 60 km
808-38537	IE-SFP/155, SSFX-SM1490/XLONG-LC (1490xmt/1550rcv), 80 km
808-38538	IE-SFP/155, SSFX-SM1550/XLONG-LC (1550xmt/1490rcv), 80 km

CWDM versions available, See website for details

IE-SFP 1250 Mbps/1.25 Gbps (OC-24) Modules

Fiber

Operating temperature:

-40°C to +85°C (-40° F to +185° F)

155 Mbps Ethernet SFP Modules

1.25 Gbps Ethernet SFP Modules

2.4 Gbps Ethernet SFP Modules

Plug in more fiber types and maximize network hardware.

Product Overview

The use of IE-SFP modules makes changing fiber requirements within the locations of the network environment easy. IE-SFPs offer the flexibility of choosing fiber types, and also provide diagnostic information to assist the end user in the identification and troubleshooting of the pluggable modules.

All IE-SFPs are compliant with the Multi-Source Agreement (MSA), ensuring compatibility with a wide range of networking equipment.

All products are made in the USA except SFP products.

Features

All SFP Modules

- Multi-source package with Duplex LC connector
- Eye Safety designed to meet Laser Class 1 compliance with IEC 60825-1
- Compliant with ITU-T-G.957, G.958, IEEE 802.3u and 802.3z
- Single +3.3V power supply
- Hot-pluggable
- Complies with Telcordia GR-468-CORE
- All SFP modules report standard information such as:
  - » SFP Type
  - » Fiber Link Length
  - » Wavelength
  - » Bit Rate
  - » Date Code
  - » Serial Number

Extended Diagnostics (DDMI)

- Complying with SFF-8472, IE-SFP modules that include Extended Diagnostics also report information such as:
  - » Temperature
  - » Voltage
  - » Bias Current
  - » TX Power
  - » RX Power

Ordering Information

With DDMI

IE-SFP/1250-ED

	Cisco Compatible	
808-38201	808-38201CC	IE-SFP/1250-ED, MM850-LC, 220/550 m
808-38206		IE-SFP/1250-ED, MM1300-LC, 2 km
808-38200	808-38200CC	IE-SFP/1250-ED, SM1310-LC, 20 km
808-38203	808-38203CC	IE-SFP/1250-ED, SM1310/PLUS-LC, 30 km
808-38204		IE-SFP/1250-ED, SM1550/LONG-LC, 40 km
808-38205		IE-SFP/1250-ED, SM1550/XLONG-LC, 70 km
808-38208		IE-SFP/1250-ED, SM1550/XXLONG-LC (IE = -20°C to +85°C), 120 km
Single-Strand Fiber		
808-38221		IE-SFP/1250-ED, SSLX-SM1310-SC (1310xmt/1550rcv), 20 km
808-38222		IE-SFP/1250-ED, SSLX-SM1550-SC (1550xmt/1310rcv), 20 km
808-38227	808-38227CC	IE-SFP/1250-ED, SSBX-SM1310-SC (1310xmt/1490rcv), 10 km
808-38228	808-38228CC	IE-SFP/1250-ED, SSBX-SM1490-SC (1490xmt/1310rcv), 10 km
808-38223		IE-SFP/1250-ED, SSLX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
808-38224		IE-SFP/1250-ED, SSLX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
808-38229		IE-SFP/1250-ED, SSBX-SM1310/PLUS-SC (1310xmt/1490rcv), 40 km
808-38230		IE-SFP/1250-ED, SSBX-SM1490/PLUS-SC (1490xmt/1310rcv), 40 km
808-38225		IE-SFP/1250-ED, SSLX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
808-38226		IE-SFP/1250-ED, SSLX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km
with LC connectors		
808-38721		IE-SFP/1250-ED, SSLX-SM1310-LC (1310xmt/1550rcv), 20 km
808-38722		IE-SFP/1250-ED, SSLX-SM1550-LC (1550xmt/1310rcv), 20 km
808-38727	808-38727CC	IE-SFP/1250-ED, SSBX-SM1310-LC (1310xmt/1490rcv), 15 km
808-38728	808-38728CC	IE-SFP/1250-ED, SSBX-SM1490-LC (1490xmt/1310rcv), 15 km
808-38723		IE-SFP/1250-ED, SSLX-SM1310/PLUS-LC (1310xmt/1550rcv), 40 km
808-38724		IE-SFP/1250-ED, SSLX-SM1550/PLUS-LC (1550xmt/1310rcv), 40 km
808-38729		IE-SFP/1250-ED, SSBX-SM1310/PLUS-LC (1310xmt/1490rcv), 30 km
808-38730		IE-SFP/1250-ED, SSBX-SM1490/PLUS-LC (1490xmt/1310rcv), 30 km
808-38725		IE-SFP/1250-ED, SSLX-SM1490/LONG-LC (1490xmt/1550rcv), 70 km
808-38726		IE-SFP/1250-ED, SSLX-SM1550/LONG-LC (1550xmt/1490rcv), 70 km

Without DDMI

IE-SFP/1250

808-38211	IE-SFP/1250, MM850-LC, 220/550 m
808-38212	IE-SFP/1250, SM1310-LC, 10 km
808-38213	IE-SFP/1250, SM1310/PLUS-LC, 30 km
808-38214	IE-SFP/1250, SM1550/LONG-LC, 40 km
808-38215	IE-SFP/1250, SM1550/XLONG-LC, 70 km
808-38218	IE-SFP/1250c SM1550/XXLONG-LC (IE = -20° C to + 85° C), 120 km
Single-Strand Fiber	
808-38231	IE-SFP/1250, SSFX-SM1310-SC (1310xmt/1550rcv), 20 km
808-38232	IE-SFP/1250D, SSFX-SM1550-SC (1550xmt/1310rcv), 20 km
808-38233	IE-SFP/1250, SSFX-SM1310/PLUS-SC (1310xmt/1550rcv), 40 km
808-38234	IE-SFP/1250, SSFX-SM1550/PLUS-SC (1550xmt/1310rcv), 40 km
808-38235	IE-SFP/1250, SSFX-SM1490/LONG-SC (1490xmt/1550rcv), 70 km
808-38236	IE-SFP/1250, SSFX-SM1550/LONG-SC (1550xmt/1490rcv), 70 km

CWDM versions available, See website for details

Industrial Ethernet

IE-SFP 2.4 Gbps (OC-48) and 10 Gbps (OC-192) Modules

Fiber

Operating temperature:

-40°C to +85°C (-40° F to +185° F)

155 Mbps Ethernet SFP Modules

1.25 Gbps Ethernet SFP Modules

2.4 Gbps Ethernet SFP Modules

Plug in more fiber types and maximize network hardware.

Product Overview

The use of IE-SFP modules makes changing fiber requirements within the locations of the network environment easy. IE-SFPs offer the flexibility of choosing fiber types, and also provide diagnostic information to assist the end user in the identification and troubleshooting of the pluggable modules.

All IE-SFPs are compliant with the Multi-Source Agreement (MSA), ensuring compatibility with a wide range of networking equipment.

All products are made in the USA except SFP products.

Features

All SFP Modules

- Multi-source package with Duplex LC connector
- Eye Safety designed to meet Laser Class 1 compliance with IEC 60825-1
- Compliant with ITU-T-G.957, G.958, IEEE 802.3u and 802.3z
- Single +3.3V power supply
- Hot-pluggable
- Complies with Telcordia GR-468-CORE
- All SFP modules report standard information such as:
  - » SFP Type
  - » Fiber Link Length
  - » Wavelength
  - » Bit Rate
  - » Date Code
  - » Serial Number

Extended Diagnostics (DDMI)

- Complying with SFF-8472, IE-SFP modules that include Extended Diagnostics also report information such as:
  - » Temperature
  - » Voltage
  - » Bias Current
  - » TX Power
  - » RX Power

Ordering Information

With DDMI

IE-SFP/2.4-ED

808-38301	IE-SFP/2.4-ED, MM850-LC, 300 m
808-38302	IE-SFP/2.4-ED, SM1310-LC, 2 km
808-38303	IE-SFP/2.4-ED, SM1310/PLUS-LC, 15 km
808-38304	IE-SFP/2.4-ED, SM1550/LONG-LC, 40 km
Single-Strand Fiber	
808-38311	IE-SFP/2.4-ED, SSLX-SM1310-LC (1310xmt/1550rcv), 10 km
808-38312	IE-SFP/2.4-ED, SSLX-SM1550-LC (1550xmt/1310rcv), 10 km
808-38313	IE-SFP/2.4-ED, SSLX-SM1310/PLUS-LC (1310xmt/1550rcv), 20 km
808-38314	IE-SFP/2.4-ED, SSLX-SM1550/PLUS-LC (1550xmt/1310rcv), 20 km
808-38315	IE-SFP/2.4-ED, SSLX-SM1310/LONG-LC (1310xmt/1550rcv), 40 km
808-38316	IE-SFP/2.4-ED, SSLX-SM1550/LONG-LC (1550xmt/1310rcv), 40 km

Without DDMI

IE-SFP/2.4

808-38321	IE-SFP/2.4, MM850-LC, 300 m
808-38322	IE-SFP/2.4, SM1310-LC, 2 km
808-38323	IE-SFP/2.4, SM1310/PLUS-LC, 15 km
808-38324	IE-SFP/2.4, SM1550/LONG-LC, 40 km
Single-Strand Fiber	
808-38331	IE-SFP/2.4, SSLX-SM1310-LC (1310xmt/1550rcv), 10 km
808-38332	IE-SFP/2.4, SSLX-SM1550-LC (1550xmt/1310rcv), 10 km
808-38333	IE-SFP/2.4, SSLX-SM1310/PLUS-LC (1310xmt/1550rcv), 20 km
808-38334	IE-SFP/2.4, SSLX-SM1550/PLUS-LC (1550xmt/1310rcv), 20 km
808-38335	IE-SFP/2.4, SSLX-SM1310/LONG-LC (1310xmt/1550rcv), 40 km
808-38336	IE-SFP/2.4, SSLX-SM1550/LONG-LC (1550xmt/1310rcv), 40 km

With DDMI

IE-SFP/10 Gbps

808-38600	IE-SFP+ SR/10G-ED, MM850-LC, 33 m
808-38601	IE-SFP+ LR/10G-ED, SM1310-LC, 10 km

With DDMI

IE-XFP/10 Gbps

808-38610	IE-XFP SR/10G-ED, MM850-LC, 33 m
808-38611	IE-XFP LR/10G-ED, SM1310-LC, 10 km
808-38612	IE-XFP ER/10G-ED, SM1550-LC, 40 km
808-38613.	IE-XFP ZR/10G-ED, SM1550/PLUS-LC, 80 km

CWDM versions available, See website for details

iMediaChassis

The iMediaChassis line provides SNMP management capabilities when used in conjunction with the SNMP Module.

6-YEAR Comprehensive Warranty

Version	iMediaChassis/20	iMediaChassis/6	iMediaChassis/3
# of Slots	20 + 1 SNMP	6 + 1 SNMP	3 + 1 SNMP
Power Specs	Redundant AC and DC Field replaceable AC Power Supply: 100-240V AC, 50/60Hz, 3A/1.5A DC power Supply: -48V DC, 5A ACDC Power: 100-240V AC, 50/60Hz, 2A, -48V DC, 4.4A	Redundant AC and DC Field replaceable AC Power Supply: 100-240V AC, 50/60Hz, 1A DC power Supply: -48V DC, 2A	AC and DC Not field replaceable AC Power Supply: 100-240V AC, 50/60Hz, 0.75A DC power Supply: 35V DC to 75V DC, 1.6A
Operating Temp	+32° to +122°F (0° to +50°C)	AC Temp: -13° to +122°F (-25° to +50°C) DC Temp: -40° to +212°F (-40° to +100°C)	AC Temp: +32° to +122°F (0° to +50°C) DC Temp: -67° to +122°F (-40° to +50°C)
Storage Temp	Dual AC & ACDC Temp: -4° to +176°F (-20° to +80°C) Dual DC Temp: -4° to +140°F (-20° to +60°C)	AC Temp: -40° to +185°F (-40° to +85°C) DC Temp: -55° to +257°F (-55° to +125°C)	AC Temp: -40° to +185°F (-40° to +85°C) DC Temp: -40° to +212°F (-40° to +100°C)
Humidity	5% to 95%, non-condensing, 0 – 10,000 ft altitude		
Dimensions	5.20"H x 19"W x 13.80"D (13.21 cm x 48.26 cm x 35.05 cm)	1.75"H x 17.35"W x 10.65"D (4.45 cm x 44.07 cm x 27.05 cm)	1.73"H x 7.50"W x 8.74"D (4.44 cm x 19.0 cm x 22.0 cm)

Regulatory
UL/cUL, CSA, CE, CB

Product Description	Version	FCC Class A	FCC Class B
iMediaChassis/20	Dual AC		X
	Dual DC		X
	ACDC		X
iMediaChassis/6	AC	X	
	Dual AC	X	
	DC		X
	Dual DC		X
iMediaChassis/3	AC		X
	2AC		X
	DC		X
	2DC		X
	ACDC		X

iMediaChassis/3	
850-10949-AC	1 fixed AC power supply
850-10949-2AC	2 fixed AC power supplies
850-10949-DC	1 fixed DC power supply
850-10949-2DC	2 fixed DC power supplies
850-10949-ACDC	1 fixed AC and 1 fixed DC power supply

iMediaChassis/6	
850-10953-AC	Includes 1 AC power supply module with option for 2nd power supply
850-10953-2AC	Includes 2 AC power supply modules
850-10953-DC	Includes 1 DC power supply module with option for 2nd power supply
850-10953-2DC	Includes 2 power supply modules

iMediaChassis/20	
850-10960-2AC	Includes 2 AC power supply modules
850-10952-AC	Includes single fixed AC power supply module
850-10960-2DC	Includes 2 DC power supply modules
850-10960-ACDC	Includes 1 AC, 1 DC power module

The iMediaChassis lines operate with the following IMC Modules:

iMcV-FiberLinX-II: Pg 7
iMcV-Giga-FiberLinX-II: Pg 8
iMcV-WDM: Pg 24
IE-iMcV-2xLIM: Pg 25
iMcV-PIM: Pg 26
iMcV-LIM: Pg 26
iMcV-LIM 10/100: Pg 26
iMcV-Gigabit: Pg 27
IE-iMcV-Gigabit: Pg 27
iMcV-MediaLinX: Pg 28
IE-iMcV-MediaLinX: Pg 28
iMcV-Giga-MediaLinX: Pg 28
iMcV-T1/E1/J1: Pg 29
iMcV-DS3/E3/STS: Pg 30
iMcV-E1 Mux/4: Pg 31
iMcV-E1 Mux/4 + Ethernet: Pg 31
IE-iMcV-T1 Mux/4+Ethernet: Pg 32
iMcV-Switch: Pg 33
IE-iMcV-MultiWay: Pg 34
iMcV-PSE-Midspan: Pg 35
IE-iMcV-VDSL2 LANextender: Pg 36
IE-iMcV-Mode Converters: Pg 39
SNMP Management Module: Pg 43

FREE iVIEW² DEVICE MANAGEMENT APPLICATION SNMP Management Software

Accessories

SNMP Module	
850-39950	iMediaChassis SNMP Management Module

*An SNMP module is required to utilize full SNMP functionality in the iMediaChassis family.

Serial Cable and Adapters			
825-39950	Serial Cable, DB9 (Male) to DB9 (Female)	825-39500	Adapter, RJ-45 to DB9 (Female)

Power Supplies for iMediaChassis/6	
806-39125-AC	PS/125-AC Module, for iMediaChassis/6-AC (125 watt, 100-240 VAC)
806-39125-DC	PS/125-DC Module, for iMediaChassis/6-DC (125 watt, -48 V DC)

Power Supplies for iMediaChassis/20	
806-39400-AC	PS/400-AC Module, for p/n 50-10954-AC, iMediaChassis/20-AC (400 watt, 100-240 VAC)
806-39401-AC	PS/401-Dual-AC Module, for p/n 850-10956-AC, iMediaChassis/20-2AC
806-39960-AC	PS/960-AC Power Module, for p/n 850-10960-2AC, iMediaChassis/20-2AC (100-240 VAC)
806-39960-DC	PS/960-DC Power Module, for p/n 850-10960-2DC, iMediaChassis/20-2DC (300 watt, -48 VDC)

IE-Power/5V	
806-39753	IE-Power/5V Module, AC to DC DIN Rail Power Adapter (-20° to +70°C) , for IE-Multiway, MiniMc Family, IE-MiniMc Family and IE-Mode Converter

SNMP Management Module

The SNMP Management Module allows users to utilize the full SNMP functionality of all manageable "iMcV" modules when installed concurrently in an iMediaChassis. Employing managed media converters in your network allows for troubleshooting at remote sites without the initial need for a costly truck roll.

MediaConverter

6-YEAR Comprehensive Warranty

The MediaConverter lines operate with the following IMC Modules:

McPIM TP/FO
McLIM TX/FX and TX/SX
McLIM TP-TX/FX and TP TX/SX
McGigabit TX/SX and TX/LX

Version	1-Slot	4-Slot	8-Slot	12-Slot AC
Part Number	851-10901	851-10904	851-10908	851-10912
AC/DC	AC	AC	AC	AC
Power Supply	115-230V AC, 50/60Hz, 0.3/0.15A	120-240V AC, 50/60Hz, 1.0/0.5A	100-250V AC, 50/60Hz, 1.6A	115-230V AC, 50/60Hz, 1.2/0.6A
Regulatory	FCC Class A, UL/CUL, CE, CSA			
Operating Temp	+32° to +122°F (0° to +50°C)			
Storage Temp	-13° to +158°F (-25° to +70°C); 5 to 95% (non-condensing)			
Humidity	5% to 95%, non-condensing, 0 – 10,000 ft altitude			
Dimensions	1.60"H x 4.75"W x 5.20"D (4.06 x 12.07 x 13.21 cm)	1.75"H x 8.60"W x 4.73"D (8.3 x 21.84 x 12.01 cm)	1.75"H x 17.4"W x 4.70"D (4.45 x 44.20 x 11.94 cm)	1.75"H x 17.40"W x 8.76"D (4.45 x44.20 x 22.25 cm)
Weight	2 lbs (0.9 kg)	3.5 lbs (1.6 kg)	6.25 lbs (2.8 kg)	11.0 lbs (5 kg)
Mounting	NA	Shelf (Sold Separately)	Brackets Included	Brackets Included

The MediaChassis and IE-MediaChassis lines operate with all the iMcV-Modules

	MediaChassis		IE-MediaChassis (extended operating temperature)			
Version	/1-AC	/2-AC	/1-AC	/1-DC	/2-AC	/2-DC
Part Number	850-13100	850-13101	850-33100	850-32105	850-13106	850-32106
AC/DC	AC	AC	AC/DC	DC	AC	DC
Power Supply	100-240V AC, 50/60Hz, 1A Internal AC Power Supply		DC Terminal: 7-50V DC, 3A-0.1A (Negative ground referenced)	35-75V DC, 500mA, Internal DC Power Supply	100-240V AC, 50/60Hz, 1A Internal AC Power Supply	35-75V DC, 1.5A (Negative ground referenced) Internal DC Power Supply
Regulatory	FCC Class A, UL/cUL, CE, CSA, CB	FCC Class B, UL/cUL, CE, CSA	FCC Class B, UL/cUL, CE, CSA	FCC Class B, UL/cUL, CE, CSA, CB	FCC Class A, UL/cUL, CE, CSA, CB	
Operating Temp	+32° to +122°F (0° to +50°C)		-40° to +158°F (-40° to +70°C) with AC wall adapter +14° to +122°F (-10° to +50°C)	-31° to +176°F (-35° to +80°C)		
Storage Temp	-40° to 185°F (-40° to 85°C)					
Humidity	5% to 95%, non-condensing, 0 – 10,000 ft altitude					
Dimensions	1.55"H x 4.75"W x 7.31"D (3.94 cm H x 12.07 cm W x 18.57 cm D)	2.2"H x 4.75" W x 7.3"D (5.6 cm H x 12.1 cm W x 18.5 cm D)	0.90"H x 4.30" W x 4.00"D (2.29 cm H x 10.92 cm W x 10.16 cm D)	1.55"H x 4.75"W x 7.31"D (3.94 cm H x 12.07 cm W x 18.57 cm D)	2.2"H x 4.75" W x 7.3"D (5.6 cm H x 12.1 cm W x 18.5 cm D) 2.2"H x 4.75" W x 7.3"D (5.6 cm H x 12.1 cm W x 18.5 cm D	
Weight	1.6 lbs (0.73 kg)	1.9 lbs (0.86 kg)	0.6 lbs (0.27 kg)	1.6 lbs (0.73 kg)	1.9 lbs (0.86 kg)	

Accessories

Part Number	Accessories for MediaChassis
895-39226	McBasic/MediaChassis Rackmount Brackets
895-39227	McBasic/MediaChassis Wallmount Brackets
895-39949	Rackmount shelf for iMediaChassis/3, McBasic, MediaChassis, AccessEtherLinX
	Accessories for MediaConverter Chassis
806-39040	PS/40x-AC (40 watt, 100 to 240 VAC input)

Types of Fiber Connectors

The ST Connector
Which uses a bayonet locking system is the most common connector.

The FC Connector
Is a threaded connector used in high-vibration environments.

The SC Connector
Has a molded body and a push-pull system.

The MTO Connector
Is a connector that uses high-fiber-count ribbon cable. Used in high-density fiber applications.

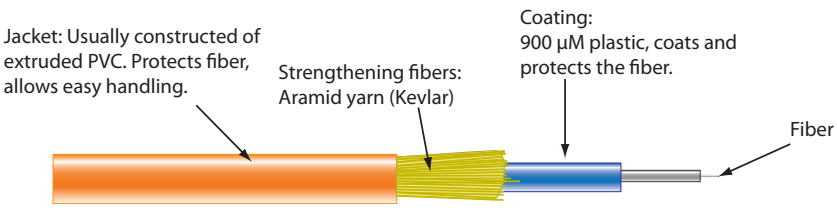
The LC Connector
Is a small-form-factor connector, features a ceramic ferrule and looks like a mini SC connector.

The MTP Connector
Is a connector that uses high-fiber-count ribbon cable. Used in high-density fiber applications.

The MT-RJ Connector
Is a small-form RJ-style connector, features a molded body and uses a cleave-and-leave splicing.

The MU Connector
Resembles the larger SC connector, but it's much smaller. It uses the simple push-pull latching connection. Used in high-density fiber applications.

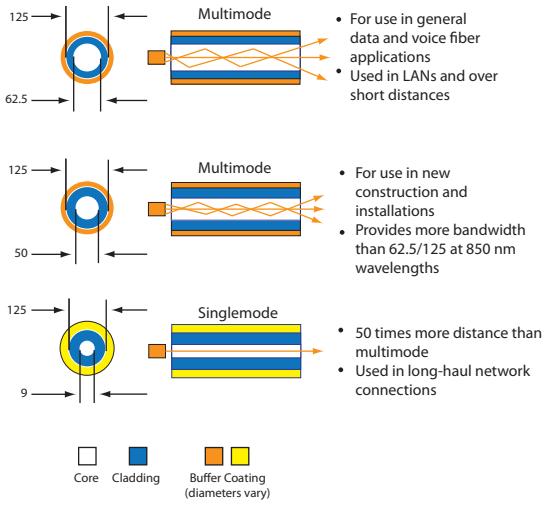
Fiber Optic Cable Construction


Jacket: Usually constructed of extruded PVC. Protects fiber, allows easy handling.
Strengthening fibers: Aramid yarn (Kevlar)
Coating: 900 µM plastic, coats and protects the fiber.
Fiber

Fiber Performance Standards

Fiber Type	Wavelength	Attenuation (dB/km) Max.	Bandwidth (MHz/km)
Multimode			
50-/125-Micron	850 nm	3.5	500
	1300 nm	1.5	500
62.5-/125-Micron	850 nm	3.5	160
	1300 nm	1.5	500
Singlemode			
Premises	1310 nm	1.0	—
	1550 nm	1.0	—
Outside Plant	1310 nm	0.5	—
	1550 nm	0.5	—

Multimode vs. Singlemode Total Internal Reflection



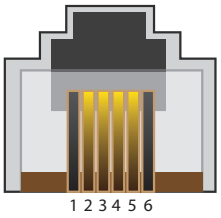
- For use in general data and voice fiber applications
- Used in LANs and over short distances

- For use in new construction and installations
- Provides more bandwidth than 62.5/125 at 850 nm wavelengths

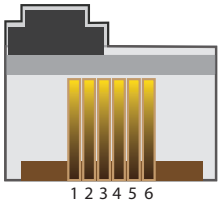
- 50 times more distance than multimode
- Used in long-haul network connections

Types of Modular Jacks

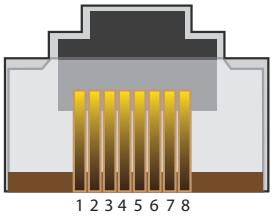
6-Position 4 Contact (RJ-11)



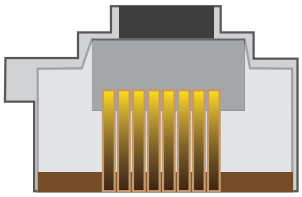
6-Position 6 Contact (MMJ)



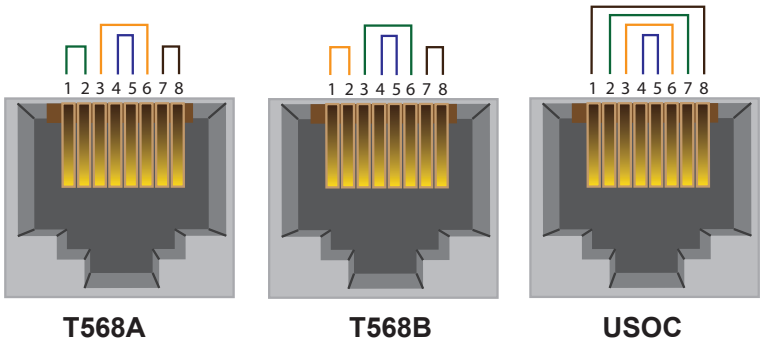
8-Position 8 Contact (RJ-45)



8-Position 8 Contact Keyed (RJ-45)



T568A, T568B and USOC Wiring



Straight-Pinned and Crossover Cable

Straight-pinned cable has the most common type of pinning. The send and receive pairs are wired straight through on either end of the cable.

Crossover cable is generally used for peer-to-peer connections. The send and receive pairs are crossed between Connector A to Connector B on either end of the cable.

T568A and T568B Crossover Cable		
Connector (A)		Connector (B)
1	—	3
2	—	6
3	—	1
4	—	2
5	—	4
6	—	5
7	—	8
8	—	7

USOC Crossover Cable		
Connector (A)		Connector (B)
1	—	8
2	—	7
3	—	6
4	—	5
5	—	4
6	—	3
7	—	2
8	—	1

Balanced Twisted-Pair Cable Specifications

	CAT5	CAT5e	CAT6	CAT6a	CAT7
Frequency	100 MHz	100 MHz	250 MHz	500 MHz	600 MHz
Attenuation (Min. at 100 MHz)	22.0 dB	22.0 dB	19.8 dB	—	20.8 dB
Characteristic Impedance	100 ohms ± 15%	100 ohms ± 15%	100 ohms ± 15%	—	100 ohms ± 15%
NEXT (Min. at 100 MHz)	32.3 dB	35.3 dB	44.3 dB	27.9 dB	60.7 dB
PS-NEXT (Min. at 100 MHz	—	32.3 dB	42.3 dB	—	57.7 dB
EL-FEXT (Min. at 100 MHz	—	23.8 dB	27.8 dB	9.3 dB	38.4 dB
PS-ELFEXT (Min. at 100 MHz)	—	20.8 dB	24.8 dB	—	35.4 dB
PS-ANEXT (Min. at 500 MHz	—	—	—	49.5 dB	—
PS-AELFEXT (Min. at 500 MHa)	16.0 dB	20.1 dB	20.1 dB	23.0 dB	14.1 dB
Return Loss (Min. at 100 MHz)	16.0 dB	20.1 dB	20.1 dB	8.0 dB	17.3 dB
Delay Skew (Max. per 100 m)	—	45 ns	45 ns	—	20 ns
Networks Supported	100BASE-TX	1000BASE-T	1000BASE-T	10GBASE-T	10GBASE-T

NOTE: The ISO currently has Class F (Category 7a) requirements under development. They are based on Class F requirements and the Catagory 7 non-RJ style plug. They specify a bandwidth of 600 to 1000 MHz.

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